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RETURN ON ENTREPRENEURIAL PASSION

A study of funding success and timely delivery in crowdfunding

MASTER THESIS

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Regensburg, 6 January 2014

CLEARANCE CERTIFICATE

With this statement, I declare that

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2. quotations from literature, findings and thoughts of other authors and any additional information sources have been referenced within the corresponding paragraphs of the thesis;

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ABSTRACT

Entrepreneurship is fundamental to innovation and economic growth. As new ventures are in need of outside capital and traditional sources such as VCs, banks and business angels are scarce, some entrepreneurs directly "tap" the crowd of consumers instead. Crowdfunding entrepreneurs make use of the ongoing extension of the consumer's role, which by now also includes being project financiers. Many consumers are enthusiastic about the projects to which they financially and otherwise contribute. Passion is also most central to entrepreneurship. Passionate entrepreneurs create better performing ventures and are able to attract more outside capital from traditional sources of new venture funding. Drawing on publicly available data of 255 Kickstarter projects with an aggregated investment sum of over $8 m, I investigated whether passion influences a project's odds to deliver promised rewards to investors on time, and whether investors looked for signs of passion when making investment decisions. I differentiated between signs of affective and cognitive passion. Results are intriguing. They show that cognitive, not affective passion is significantly related to funding success, while the interaction between cognitive passion expressed through early updates and entrepreneurial experience is linked to timely delivery. In general, the results support the idea of the "wisdom of the crowd": Crowdfunding investors appear to be rational and comparable to traditional investors in their investment decision making criteria. The results further support the differentiation between affective and cognitive passion. They also indicate a potentially big gap between the real passion an entrepreneur experiences and the passion he expresses. Simultaneously, the study informs entrepreneurs, investors and operators of crowdfunding platforms in regard to how they can better benefit from crowdfunding.

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LIST OF ABBREVIATIONS

Bn	Billion
JOBS	Jumpstart Our Business Startups
K	Thousand
LIWC	Linguistic Inquiry and Word Count
M	Million
SD	Standard deviation
USD	United States Dollar
VC	Venture Capital

1 INTRODUCTION

1.1 Motivation and research objective

"[…] entrepreneurs […] play a critical role in expanding our economy and creating jobs" – *Barack Obama, President of the United States of America*

It is a widely held belief that entrepreneurship is beneficial for economic development (e.g. Schumpeter, 1961; Wennekers & Thurik, 1999). Fostering entrepreneurship and innovation is therefore a priority on many political agendas (e.g. OECD, 2004; The White House, 2011). One of the strongest barriers entrepreneurs and new ventures face is the access to funding, despite the existence of dedicated investors such as Venture Capitalists (VCs), banks or business angels (Cassar, 2004; Cosh, Cumming, & Hughes, 2009). Crowdfunding has recently established itself as a viable alternative source to funding (Schwienbacher & Larralde, 2012). Instead of relying on traditional sources of new venture finance, crowdfunding builds upon contributions of a large group of individuals. By means of crowdfunding over $1 bn were raised in 2011, a number expected to have doubled in 2012 (Massolution, 2013). This development is facilitated by the rise of online crowdfunding platforms such as Kickstarter or Indiegogo. Through Kickstarter alone, over $900 m have been invested since its launch in 2009. Recognizing the potential of crowdfunding, the US government has signed the Jumpstart Our Business Startups (JOBS) act legalizing equity crowdfunding, a hitherto exclusive domain of traditional investors (Chautin, 2013).

Despite the growing practical relevance of crowdfunding, there is a lack of rigorous academic research on the topic (Mollick, 2013). The extant literature has focused mainly on the investor-related factors of crowdfunded projects such as peer effects (Kuppuswamy & Bayus, 2013; Lin, Prabhala, & Viswanathan, 2013; Zhang & Liu, 2012), external factors such as geography (Agrawal, Catalini, & Goldfarb, 2011) and descriptions and models of the phenomenon (Belleflamme, Lambert, & Schwienbacher, 2013; Ordanini, Miceli, Pizzetti, & Parasuraman, 2011; Schwienbacher & Larralde, 2012). To my best knowledge, none of the

literature so far has focused particularly on the entrepreneur behind a crowdfunding project. This is surprising, considering that traditional investors, such as VCs, base a great part of their investment decision making on the personal aspects of the entrepreneur proposing a new venture (Chen, Yao, & Kotha, 2009; MacMillan, Siegel, & Narasimha, 1985). In addition, only Mollick investigated whether crowdfunding projects actually deliver, i.e. only he investigated whether crowdfunding is effective in identifying high quality new ventures.

Regarding entrepreneurial traits, passion is one of the most central aspects of entrepreneurship (Smilor, 1997). Passion can also be observed in crowdfunding: Passionate entrepreneurs trying to fund their dreams and passionate investors giving money to a cause without expecting any financial return. Entrepreneurial passion has been linked to several performance indicators of new ventures such as profits, revenue and employee growth (R. A. Baron & Tang, 2009; Baum & Locke, 2004; Smith, Baum, & Locke, 2001). To achieve their goals, passionate entrepreneurs work harder and can rely on enhanced resources such as a bigger network, motivated employees and higher creativity (R. A. Baron, 2008; R. A. Baron & Tang, 2011; Cardon, 2008; Foo, Uy, & Baron, 2009). Due to that, passion has also been shown to have a positive influence on the attraction of funding. However, passion has multiple components, such as affective, cognitive or behavioral passion, and each one can have a different effect on investors. Especially cognitive passion, also labeled preparedness, has been shown to benefit VC and business angels' evaluations of funding potential (Chen et al., 2009; Mitteness, Sudek, & Cardon, 2012). Despite the obvious importance of passion in entrepreneurship, no academic literature has specifically investigated its role in a crowdfunding context.

Currently, four broad models of crowdfunding exist based on how investors are rewarded (Mollick, 2013). Donation-based crowdfunding offers no tangible reward to investors, while reward-based crowdfunding offers tangible, but non-monetary rewards. In peer-to-peer lending investors are usually remunerated through interest rates while in equity-based crowdfunding, investors receive shares of the venture or project. Reward-based crowdfunding is the most exceptional model as it is very distinct to traditional forms of

external funding. Investors giving donations are likely to act like regular donors. Peer-to-peer lending resembles bank lending while equity-based crowdfunding compares to angel and VC funding. Therefore, this work will limit itself mainly to reward-based crowdfunding.

By means of a primary, explanatory research based on the currently most dominant reward-based crowdfunding platform Kickstarter.com I aim to address these research gaps.

1.2 Research questions and contributions

Consequently, I intend to find out what role entrepreneurial passion plays in crowdfunding, especially regarding funding success and timely delivery. The two research questions are therefore:

I) Is entrepreneurial passion related to funding success in reward-based crowdfunding?

II) Is entrepreneurial passion related to timely delivery of reward-based crowdfunded projects?

To be able to effectively and satisfyingly answer these research questions, I will address the following sub-questions:

(1) Does entrepreneurial passion influence timely delivery?

(2) Does entrepreneurial experience support the link between entrepreneurial passion and timely delivery?

(3) Does affective entrepreneurial passion influence funding success?

(4) Does cognitive entrepreneurial passion influence funding success?

(5) *Is affective or cognitive passion more relevant for investors in a crowdfunding context?*

Answering these questions holds practical relevance for the parties involved in crowdfunding, the entrepreneurs, the investors, and the crowdfunding platforms. The answers will potentially help entrepreneurs design their online project descriptions by stressing the information investors are looking for. This is relevant as investors in crowdfunding settings prefer easily accessible information, instead of having to look for it

(Ward & Ramachandran, 2010). Investors will learn whether they should look for passionate entrepreneurs when timely delivery is important. And last but not least, crowdfunding platforms benefit financially from a rising number of successfully funded projects. Therefore, recommendations on how to design the platform to express more clearly and explicitly the traits that investors look for can potentially benefit their bottom line by increasing the number of successfully funding projects and enhance the platform's reputation of providing high quality projects.

1.3 Outline

The thesis is structured as follows: In Chapter 2, crowdfunding will first be presented and discussed. Then, entrepreneurial passion will be introduced and linked to crowdfunding through hypotheses. In Chapter 3 the research design will be detailed, including the methodology, research setting, sample choice, data collection, measures as well as sample statistics. Based on the process outlined in Chapter 3, Chapter 4 reports the results of data analysis regarding hypotheses. These results will then be discussed in Chapter 5. Finally, the thesis will close with a presentation of theoretical and practical contributions as well as limitations and suggestions for future research.

2 THEORETICAL BACKGROUND AND HYPOTHESES DEVELOPMENT

In this chapter a theoretical background to the phenomenon of crowdfunding is given. To lay the basis and ensure common understanding the term crowdfunding is defined and subsequently compared to other forms of entrepreneurial finance. Then, current implementations of crowdfunding are presented followed by a description of the three main parties involved in its process. The last part of the chapter is dedicated to hypotheses development, drawing from on entrepreneurial trait literature, particularly on passion, and entrepreneurial finance literature.

2.1 Crowdfunding

One of the biggest challenges new ventures face in their initial stages is the attraction of external capital as a source of early-stage funding (Cosh et al., 2009). This is made necessary

as new ventures regularly face an internal funding gap due to lacking cash flows and are subsequently in need to attract outside capital. Crowdfunding is a relatively new and creative approach to attract outside capital.

Crowdfunding basically refers to the funding of a project or venture through a large group of individuals, the "crowd", instead of professional investors such as VCs, banks, or business angels. Entrepreneurs thus "tap the crowd" (Schwienbacher & Larralde, 2012, p. 371) directly without any standard financial intermediary making investment decisions on their behalf. Rubinton (2011) refers to this as disintermediation, the complete decentralization of decision making.

It is not historically unprecedented that people "tap the crowd" to collect small amounts of money from a larger number of people. For instance, Mozart and Beethoven collected money from patrons to create concerts and compositions and New York's Statue of Liberty was financed by small donations of American and French people (Kuppuswamy & Bayus, 2013). However, the crowdfunding phenomenon extends these examples as individuals that give money often expect a return. These returns are mostly tangible such as physical rewards or money, but can also be intangible such as preferred treatment, identification, and social esteem (Ordanini et al., 2011). In contrast to these extrinsic returns, crowdfunding investors can also be intrinsically motivated, for instance, when an individual enjoys the involvement in a certain project or is enthusiastic about a cause (Schwienbacher & Larralde, 2012).

2.1.1 Defining crowdfunding

Crowdfunding, which is rooted in concepts such as crowdsourcing (Kleemann, Voß, & Rieder, 2008; Poetz & Schreier, 2012) and microfinance (Morduch, 1999), can be seen as the next step of consumer evolution as described in marketing literature. Consumers have evolved from mere targets to key information sources, co-producers, innovation drivers, co-creators and, finally, to financiers of the very products and services they consume (Mahr, Lievens, & Blazevic, 2013; Ordanini et al., 2011).

Jeff Howe coined the term "crowdsourcing" in his 2006's Wired article, *The Rise of Crowdsourcing* (Howe, 2006), obviously deriving the name from "outsourcing". Kleemann et al. speak of the emergence of the "working consumer". They state that instead of being passive kings to be waited upon "[c]onsumers have become more like co-workers, who take over specific parts of a production process that ultimately remains under the control of a commercial enterprise" (2008, p. 7). A famous example of the rise of the working consumer is IKEA and its innovation to let consumers construct furniture at home instead of selling it fully assembled. In that way, the consumer is integrated in the value chain, leading to "economies of integration" (Piller, Moeslein, & Stotko, 2004). Crowdfunding extends the concept of crowdsourcing as crowdfunding investors not only "contribute knowledge and effort but also [have] to play promotional and investment roles in support of the initiatives being crowd-funded" (Ordanini et al., 2011, p. 447).

Being a rather recent phenomenon, the nascent academic literature regarding crowdfunding including its conceptions and definitions is limited and in evolution (Mollick, 2013). Table 5 (see Appendix A.1) provides an overview of the most relevant literature on crowdfunding. Kappel (2009) differentiates between "ex post facto crowdfunding", where funding is given after the completion of a project, and "ex ante crowdfunding", where funding is provided before the project is completed. The latter case is the more interesting one for this research. Only in this case a project's realization is dependent on the crowdfunding success.

Building upon the definition of crowdsourcing given by Kleemann et al. (2008) Belleflamme et al. (2013) define crowdfunding as "an open call, mostly through the Internet, for the provision of financial resources either in form of donation or in exchange for the future product or some form of reward to support initiatives for specific purposes" (p. 8). Mollick (2013) points out that even such a broad definition does not capture all the examples that have been identified as "crowdfunding" such as fundraising initiatives started by enthusiastic fans of a music group rather than by the music group itself (Burkett, 2011), peer-to-peer lending (Lin & Viswanathan, 2013; Zhang & Liu, 2012), as well as crowdfunding

initiatives that promise equity in return for funding (Ahlers, Cumming, Guenther, & Schweizer, 2012).

As the establishment of a comprehensive definition of crowdfunding including all past and potential future examples appears to be elusive, Mollick (2013) suggests a narrow definition for an entrepreneurial context in which crowdfunding is of special importance. He defines crowdfunding as "the efforts by entrepreneurial individuals and groups – cultural, social, and for-profit – to fund their ventures by drawing on relatively small contributions from a relatively large number of individuals using the internet, without standard financial intermediaries". The latter definition explicitly leaves out the goals of both the initiative and the investors. The goals are among the most important aspects of crowdfunding, but also the ones that are subject to the highest level of divergence. Crowdfunding entrepreneurs often expect more from crowdfunding investors then merely the provision of funds. Similarly, the motivations of crowdfunding investors range from obtaining control, over rent seeking to emotional satisfaction and involvement in activities they are passionate about. The different motivations of both the initiative and the investors will be detailed at a later point in this thesis.

Mollick's definition deliberately does not specify the threshold for when a crowd is big enough for the initiative to be considered crowdfunding, nor when the individual amount given is small enough. Indeed, such a definition would be arbitrary. There are cases of crowdfunding where the initiatives were funded by as little as seven investors[1]. At the same time there are cases where individual investors pledged more than $10,000[2]. It becomes clear that neither the number of investors nor the size of their individual contributions can

[1] My data set contained two projects on the crowdfunding platform Kickstarter.com that were funded by only 7 investors. They can be reached via the following URLs:
http://www.kickstarter.com/projects/1649648893/a-year-of-handmade-cards-for-men
http://www.kickstarter.com/projects/792562084/snap-watch
[2] Another example from Kickstarter.com, accessible via:
http://www.kickstarter.com/projects/597507018/pebble-e-paper-watch-for-iphone-and-android

serve as a firm basis for definition. What is more important than the eventual number of investors is the potential number that is created through the "open call" mentioned by Belleflamme and his colleagues.

Noteworthy is that both definitions highlight the importance of the internet. Many authors regard the development of Web 2.0 as a prerequisite to crowdsourcing (Andriole, 2010; Estelles-Arolas & Gonzalez-Ladron-de-Guevara, 2012; Kleemann et al., 2008) as it enables the creation of social networks through openness and offers the possibility for everyone to participate and collaborate easily by creating and sharing content (Lee, DeWester, & Park, 2008). Consequently, the Web 2.0 can also be regarded as the enabler for crowdfunding.

Based on this discussion, I have developed the following definition of crowdfunding in an entrepreneurial context. Crowdfunding refers to "the efforts by entrepreneurial individuals and groups – cultural, social, and for-profit – to fund their ventures through an open call, mostly using the internet, without standard financial intermediaries". This definition acknowledges the openness of crowdfunding as well as the diversity of goals and motivations both of the founders and investors of crowdfunding initiatives. In addition, it highlights the importance of the internet as an enabler of crowdfunding. I adopted Mollick's entrepreneurial context as it reflects the perspective of this research, viewing crowdfunding as an alternative form of entrepreneurial finance.

2.1.2 Other forms of entrepreneurial finance

To better understand crowdfunding in this perspective, it is useful to compare it to the relevant traditional forms of entrepreneurial finance, specifically bootstrapping, angel investing and VC funding. New ventures tend to prefer internal over external funding such as debt or equity financing (Myers & Majluf, 1984). A standard approach to internal financing is **bootstrapping** which is extensively used by entrepreneurial initiatives (Ebben & Johnson, 2006; Van Auken & Neeley, 1996; Winborg & Landstrom, 2001). Bootstrap finance refers to "[l]aunching ventures with modest personal funds" (Bhide, 1992, p. 110). This method resembles crowdfunding as in both approaches entrepreneurs try to creatively tap as many

different sources of funding as possible. While crowdfunding seeks external sources of funding, bootstrapping relies mainly on internal sources and cash management (Schwienbacher & Larralde, 2012).

At a first glance, **business angel finance** shares similarities to crowdfunding. Driven by financial, altruistic and hedonic motives (Sullivan & Miller, 1996) business angels are usually wealthy and experienced individuals that fund entrepreneurial ventures without being institutionalized investors (Freear, Sohl, & Wetzel, 1994). Although there is a tendency toward syndication among business angels their number as investors for a single venture is usually small (Paul & Whittam, 2010). This contrasts them to most crowdfunding investors. Business angels are small in number, rather experienced and provide larger sums.

Venture Capitalists are specialized firms usually targeting markets with strong information asymmetries, where their deep industry knowledge helps them identifying profitable investment opportunities (Amit, Brander, & Zott, 1998). VC firms finance privately held new ventures, often in combination with the provision of managerial expertise and professionalization (Amit et al., 1998; Hellmann & Puri, 2002). Compared to banks, VCs usually demand equity instead of collateral making them especially useful for very young ventures that have not acquired many assets yet (Ueda, 2004). Due to the acquisition of managerial and industry expertise VC-backed new ventures outperform their peers (Bottazzi & Da Rin, 2002; Keuschnigg, 2004). Comparable to business angels, VCs are small in number, provide large sums and are very experienced, contrasting them to crowdfunding investors.

Despite the constraining role of geography and spatial proximity in VC and angel investor funding decisions (Sorenson & Stuart, 2001; Wong, Bhatia, & Freeman, 2009) these factors seem to play a reduced but not insignificant role in crowdfunding. While spatial proximity between investors and entrepreneurs does not seem to matter much in general it still plays a role in the initial phase of a project when family and friends are the major contributors (Agrawal et al., 2011).

2.1.3 Current crowdfunding models

At the moment there are four broad crowdfunding models observable in action. They are donation-based or patronage crowdfunding, reward-based crowdfunding, peer-to-peer lending and equity-based crowdfunding.

Donation-based or patronage crowdfunding offers no financial or other tangible rewards to crowdfunding investors and are often found in art or humanitarian projects (Mollick, 2013). This model makes up around 20% of crowdfunding (Schwienbacher & Larralde, 2012). Interestingly enough, due to the possible community benefits in crowdfunding or the expectation to become consumers, crowdfunding investors also donate to for-profit organizations (Belleflamme et al., 2013).

According to a recent industry report **reward-based crowdfunding** is the most prevalent form of crowdfunding (Crowdsourcing.org, 2012). In this model investors expect a reward for their investment, which is non-monetary, but usually tangible such as a supporter T-shirt. In some cases the reward will be intangible, such as a day at the set of a crowdfunded movie. A very common model of reward-based crowdfunding is pre-ordering the product or service to be created through the crowdfunding initiative (Belleflamme et al., 2013).

In **peer-to-peer lending** the "investor" offers a loan to a peer. In some cases, especially in microfinance peer-to-peer lending (e.g. Kiva.org), the individuals might be more altruistically or philanthropically rather than financially motivated, making peer-to-peer lending comparable to patronage crowdfunding (Mollick, 2013). Overall, this model resembles classical bank loans, although loans are given by individuals instead of institutions.

Comparable to VC and business angel funding, in **equity-based crowdfunding** investors receive equity of the venture in return for their investment. To date, it is the rarest form of crowdfunding (Massolution, 2013). This is mainly due to legal constraints as general solicitation for offering equity is usually limited to publicly traded equity. As of Fall 2013 the JOBS act, signed in 2012, will allow U.S.-based ventures to raise up to $1 million per year in

equity through crowdfunding (Chautin, 2013). A strong rise of this form of crowdfunding can therefore be expected.

It becomes obvious that reward-based crowdfunding is very distinct from traditional forms of external financing. While the other three models all have comparable traditional financing pendants, reward-based crowdfunding is rather exceptional. In addition, it is currently the most dominant form of crowdfunding. Therefore, this research will mainly limit itself to reward-based crowdfunding.

2.1.4 The parties involved in crowdfunding

In most crowdfunding projects there are three parties involved. The initiator (or entrepreneur) behind the project, the crowdfunding investors and an online platform that connects the other two parties. In this chapter these parties will be presented.

2.1.4.1 Crowdfunding entrepreneurs: Goals of crowdfunding campaigns

The foremost goal of crowdfunding usually is to secure financing. Often, the amount sought is small, for instance to initiate a one-time project, but crowdfunding is establishing itself as a viable alternative to traditional seed and new venture funding (Schwienbacher & Larralde, 2012).

Compared to traditional seed and new venture funding sources such as VCs, crowdfunding offers more benefits than simply money. It can be used to validate a product and demonstrate demand (Schwienbacher & Larralde, 2012), which then can help secure funds from the traditional sources (Mollick, 2013). A case in point is Oculus, a 3D gaming device that raised $75 million from VC firms after having secured more than $2 million through crowdfunding (Velazco, 2013). Integrating the benefits of customer co-creation, another potential benefit of crowdfunding lies in the possibility to include the crowd in strategic decisions about product design and the nature of the product (Belleflamme et al., 2013; Mahr et al., 2013). On various Kickstarter.com projects feedback and suggestions of investors have led to further product development and additional features. In addition, crowdfunding projects can create considerable viral online buzz (Burtch, Ghose, & Wattal, 2013), especially when passionate investors take on promotional roles (Ordanini et al., 2011).

This can increase the future demand for a project and help find traditional investors or collaborators such as game developers for OUYA, a crowdfunded game console.

Just like entrepreneurs relying on conventional sources of entrepreneurial finance, crowdfunding entrepreneurs have individual traits. For traditional investors, these traits are central to their investment decision making (Cardon, Sudek, & Mitteness, 2009). Passion, possibly the most important trait in entrepreneurship (Smilor, 1997), will be closer investigated in the course of this research.

2.1.4.2 Crowdfunding investors: Their motivation, roles and behavior

The second party involved is the crowd of supporters that choose to financially, and maybe also otherwise, support a project. They are characterized by various motivations, roles and behaviors. Often, crowdfunding initiatives are funded by a large number of rather inexperienced investors compared to traditional entrepreneurial finance sources such as VCs and business angels (Schwienbacher & Larralde, 2012).

Many crowdfunding initiatives do not offer any form of financial reward to their investors, yet receive funding (Lambert & Schwienbacher, 2010). There seem to be other benefits that drive crowdfunding investors. Most basic, investors can either be intrinsically or extrinsically motivated (Kleemann et al., 2008). In reality, many investors have several motives, thus can be intrinsically and extrinsically motivated at the same time. Intrinsic motivation refers to the rewarding experience of doing a particular task and is intangible and non-financial; investors are motivated form “within”. For instance, enthusiastic and passionate fans of a music group that are willing to fund the group’s next album are intrinsically motivated. Despite the diversity of investor motivations, there seems to be a common and shared intrinsic theme – the enjoyment of being involved in innovative behavior (Ordanini et al., 2011). Extrinsic motivation can be tangible and intangible. Tangible extrinsic motivation can be monetary, i.e. the investors expect a financial reward, or non-monetary, e.g. when investors pre-order the product or receive another good in return for their investment. Intangible extrinsic motivation includes recognition and social esteem, for instance when an investor is officially thanked in the end credits of a crowdfunded movie

or appears as a character in a crowdfunded comic. Preferred treatment, such as when crowdfunding investors are offered a limited, special version of the product or are promised to receive the product before regular customers is another example of extrinsic, intangible motivation.

In accordance with the goals of crowdfunding entrepreneurs, investors can take on several roles. They range from passive and silent providers of money to actively involved and entrepreneurial decision-makers (Ordanini et al., 2011). Despite their relative inexperience as investors the "wisdom of the crowd" can benefit crowdfunding initiatives (Schwienbacher & Larralde, 2012). Investors can also serve as promoters of a crowdfunding initiative, either because they hope for a higher financial return or because they are enthusiastic about the cause or goal of a project.

A large portion of the extant literature has focused on crowdfunding investor behavior. It has been established that crowdfunding investors are rational investors who base their decisions on signs of quality as well as on social information, such as peer behavior and an entrepreneur's displayed social capital (Burtch et al., 2013; Kuppuswamy & Bayus, 2013; Lin & Viswanathan, 2013; Mollick, 2013; Zhang & Liu, 2012). Investor behavior and social information is a strong predictor of funding success (Etter, Grossglauser, & Thiran, 2013).

2.1.4.3 The third party: Crowdfunding platforms

A third party often involved in crowdfunding are the intermediating or facilitating online platforms which bring together those who seek and those who offer funding. These platforms are designed to enable unfolding of a Matthew effect (Merton, 1957), which is central to crowdfunding. This effect describes the magnification of the impact of project quality and previous funding received on funding success through social interaction among investors and potential investors. Most crowdfunding platforms support this by creating popularity lists, letting investors easily share projects over social media, etc. (Burtch et al., 2013). A number of online crowdfunding platforms have emerged in the last four to six years (Schwienbacher & Larralde, 2012). The earliest successful example, Sellaband.com, an

originally Amsterdam-based music crowdfunding site, dates back to 2006 (Agrawal et al., 2011). The earliest reward-based and currently most successful crowdfunding platform is Kickstarter.com, having raised over $800 million since its launch in 2009. All forms of crowdfunding have dedicated online platforms. This work will conduct its study on Kickstarter.com, as will be discussed in the Methodology section.

As can be seen from this introduction, the extant literature has focused mainly on the investor-related factors of crowdfunded projects such as peer effects, external factors such as geography and descriptive statistics (see also Table 5 in Appendix A.1). To my best knowledge none of the literature has focused particularly on the entrepreneur behind a crowdfunding project. This is surprising as traditional investors, such as VCs base a great deal of their investment decision making on the personal aspects of the entrepreneur proposing a new venture (Chen et al., 2009; MacMillan et al., 1985). In addition, only Mollick investigated whether crowdfunding projects actually deliver. It is therefore the aim of this study to investigate the influence of entrepreneurial traits on crowdfunding success and delivery.

2.2 Entrepreneurial passion in crowdfunding

"I invest in people, not ideas. If you find good people, if they're wrong about the product, they'll make a switch, so what good is it to understand the product that they're talking about in the first place?" – *Arthur Rock, legendary Silicon Valley VC*

Entrepreneurial traits have gathered considerable research attention in the extant entrepreneurship literature. However, their influence on funding success and performance in a crowdfunding context are not researched yet (Schwienbacher & Larralde, 2012), apart from Mollick (2013)'s exploratory study that included an entrepreneur's preparedness as a sign of project quality. An outstanding entrepreneurial trait is passion, the "perhaps most observed phenomenon of the entrepreneurial process" (Smilor, 1997, p. 342). It fosters elements central to entrepreneurship such as creativity and opportunity recognition (Cardon, Gregoire, Stevens, & Patel, 2013). Entrepreneurship is even referred to as a "Tale of passion"

(Cardon, Zietsma, Saparito, Matherne, & Davis, 2005, p. 23). Also in other contexts passion plays an important role. In corporate new product development product champions promote new ideas with enthusiasm (Howell & Boies, 2004) and in a non-profit environment passion might be even more crucial as donors cannot expect any financial returns (Chen et al., 2009). Passion is also central to crowdfunding. Many crowdfunding initiatives are built on the enthusiastic and passionate support of their investors, especially in cultural and social settings. However, passion is not limited to projects funded by donations or for non-profit causes. Many crowdfunding investors are also passionate about new, innovative products. Sometimes this passion is rather affective, sometimes it is more cognitive. Either way, it starts with the founder of an initiative - in the context of this research - with the crowdfunding entrepreneur and is then conveyed to potential investors.

Despite its obvious popularity, literature on entrepreneurial passion is in a developmental state (Cardon et al., 2013; Cardon, Wincent, Singh, & Drnovsek, 2009) and, to my best knowledge, there exists no literature on entrepreneurial passion in a crowdfunding context yet.

2.2.1 Defining entrepreneurial passion

Vallerand et al. defined passion as "a strong inclination toward an activity that people like, that they find important, and in which they invest time and energy" (2003, p. 756). This exemplary definition highlights three components of passion, i.e. affection, cognition, and behavior. Affective passion is often referred to as enthusiasm, cognitive passion as preparedness and behavioral passion as commitment (Cardon, Sudek, et al., 2009).

Definitions from the entrepreneurship literature especially highlight passion's affective component recognizing that "Schumpeter himself says, creation is inherently emotional" (Goss, 2005, p. 209). It has been labeled "love" for work (Baum & Locke, 2004, p. 588), "selfish love of work" (Shane, Locke, & Collins, 2003, p. 268) "enthusiasm, joy, and even zeal" (Smilor, 1997, p. 342) and the entrepreneurial process has been compared to raising a child (Cardon et al., 2005). An entrepreneur's passion consists of "consciously accessible, intense positive feelings experienced by engagement in entrepreneurial activities

associated with roles that are meaningful and salient to the self-identity of the entrepreneur" (Cardon, Wincent, et al., 2009, p. 517). It is therefore a positive, intense and ongoing rather than a temporary feeling. It is linked to the entrepreneur's venture (domain specificity) and is profoundly meaningful to the entrepreneur.

Instead of focusing on the entrepreneur's experience of passion, I will focus on the display of passion. Displayed or expressed passion might be as important as experienced passion, or even more so in situations when an entrepreneur needs to convince investors and clients or motivate employees (Cardon, Wincent, et al., 2009). Chen et al. defined entrepreneurial passion "as an entrepreneur's intense affective state accompanied by cognitive and behavioral manifestations of high personal value" (2009, p. 201). The authors note that passion is a multidimensional construct. In this work, however, I will focus on an entrepreneur's affective and cognitive passion as it is expressed and observable by others on the online platform Kickstarter.com.

2.2.2 Entrepreneurial passion, new venture performance and delivery

An important question is whether new ventures perform, i.e. whether they deliver on their promises. Mollick's study showed that they largely do. However, 75% of projects deliver later than promised to investors at project inception. Given the significance of this figure, the subsequent question arises: What influences the probability of timely delivery of a crowdfunded project? A look at an entrepreneur's passion might yield answers.

Passionate entrepreneurs are more committed to their ventures. Successful entrepreneurs usually "love the process of building an organization and making it profitable" (Shane et al., 2003, p. 269), because "it's so hard (to build a company) that if you don't have a passion, you'll give up" (Steve Jobs as cited in Chen et al., 2009, p. 199). They often refer to their venture as their "baby". Comparing the venture creation process with the nurturing and raising of a child Cardon et al. (2005) argue that passion leads to a strong identification with the venture. Entrepreneurs consequently work harder and develop their venture with more effort, enthusiasm and persistence.

As a result, passionate entrepreneurs are more successful at growing their ventures (Baum & Locke, 2004; Smith et al., 2001). Passion has been linked to venture growth because passionate entrepreneurs are better at a range of activities and attributes central to entrepreneurship. An entrepreneur's positive affect predicts the additional effort that he puts into his venture, beyond what is immediately required (Foo et al., 2009). Positive affect also enhances an entrepreneur's creativity increasing the innovativeness of the venture (R. A. Baron & Tang, 2011). R. A. Baron (2008) argued that the positive affect of an entrepreneur also increases his persuasiveness and the breadth of his social networks. In addition, he argued that positively affective entrepreneurs are better in developing strategies to respond to highly dynamic environments. He concluded that an entrepreneur's positive affect should increase venture success.

Also employee performance is influenced by an entrepreneur's passion. "When employees are passionate about their work, their organizations thrive" (Chang, 2001, p. 110). Cardon (2008) proposed that entrepreneurial passion is contagious resulting in passionate employees. In support of this proposition Breugst, Domurath, Patzelt, and Klaukien (2012) found that an entrepreneur's passion for developing and inventing increased employee commitment. J. N. Baron and Hannan (2002) showed that ventures whose founders base their employee attachment mainly on "love" for the venture enjoy the lowest likelihood of organizational failure.

Ultimately, passion yields financial returns. An entrepreneur's expressiveness (the ability to express feelings and reactions clearly and openly) is related his financial success (R. A. Baron & Markman, 2000, 2003) and to several success measures of new venture performance such as sales, profit and employee growth rate (R. A. Baron & Tang, 2009).

Do more passionate entrepreneurs have a higher likelihood of delivering on-time? Passionate entrepreneurs are more committed to their ventures. They invest more time and effort, which is especially relevant when deadlines are approaching and unforeseen challenges need to be overcome in the last minute. They can rely on bigger networks and are more creative when solving problems. Passionate entrepreneurs are also better able to cope

with dynamic environments further enhancing their ability to overcome obstacles threatening timely delivery. In addition, many crowdfunding projects have a team rather than just the entrepreneur working toward its success. The contagiousness of entrepreneurial passion leads to increased employee commitment. This increases the likelihood that barriers to a timely delivery are overcome as employees are more willing to work overtime. The ability of passionate entrepreneurs to effectively solve problems is further supported by their success regarding financial return and venture growth. Therefore, I propose:

H1. Higher (affective and cognitive) entrepreneurial passion is positively related to timely delivery.

Many entrepreneurs found more than one venture and many project founders on Kickstarter.com initiate more than one project. Experience gathered through founding ventures creates learning for the entrepreneur (Cope, 2005; Corbett, 2005). Often, subsequent ventures benefit from previous entrepreneurial experience. The entrepreneur has had the opportunity to learn from mistakes he made in the past and can thus try to avoid them in the future (MacMillan, 1986). As a consequence, an entrepreneur's previous experience has an influence on his future success. Experienced entrepreneurs are better at identifying and exploiting business opportunities (Ucbasaran, Westhead, & Wright, 2009). They learn how to better use the resources they have to overcome barriers and are consequently more successful (Stuart & Abetti, 1990). This implies that, ceteris paribus, an entrepreneur with more experience is likely to be more successful than a less experienced one, even though they face the same conditions, rely on the same resources, etc. In crowdfunding, entrepreneurs can only learn from successfully funded projects. Unsuccessfully funded projects do not get executed, thus offer no opportunity to gather entrepreneurial experience, i.e. experience in founding and managing a venture or project. Of course, unsuccessfully funded projects offer learning in regard to crowdfunding itself, but not in regard to fulfilling delivery obligations.

Having had the opportunity to learn from past mistakes, more experienced entrepreneurs are likely to be better able to translate their passion into the right action which increases their chances of delivering on time. They do so by either being better able to overcome challenges faced, or by avoiding them in the first place. Therefore, I propose the following interaction effect between entrepreneurial experience and entrepreneurial passion.

H2. Entrepreneurial experience moderates the relationship between (affective and cognitive) entrepreneurial passion and performance such that the link is stronger for high levels of entrepreneurial experience.

2.2.3 Entrepreneurial passion and funding success

Investors base their investment decisions on the attributes of the entrepreneur, the management team and the business opportunity (Cardon, Sudek, et al., 2009). Regarding the attributes of the entrepreneur, the literature has established a link between passion and funding success. This is not surprising, considering the strong correlations identified between an entrepreneur's passion and several performance criteria, such as venture growth and financial metrics. In addition, "passion is often critical to convince the targeted individuals to invest their money, time, and effort in the new venture" (Chen et al., 2009, p. 199).

Passion is one of the top criteria angel investors look for when evaluating the funding potential of new ventures (Mitteness et al., 2012; Sudek, 2006). In accordance, VCs acknowledge that the difference between successful and unsuccessful ventures, ceteris paribus, is the entrepreneurs' capacity for sustained and intense effort, in other words, their passion (MacMillan, Zemann, & SubbaNarasimha, 1987).

Passion can be divided into enthusiasm (affective passion), preparedness (cognitive passion) and commitment (behavioral passion). Preparedness has been found to be an important investment decision criterion for angel investors (Cardon, Sudek, et al., 2009), VCs (Chen et al., 2009; Kirsch, Goldfarb, & Gera, 2009) and crowdfunding investors (Mollick, 2013). In the case of angel investing Cardon and her colleagues find that enthusiasm and commitment only play a role in the initial screening phase but not anymore

during the actual investment phase. Chen et al. report that cognitive passion and not affective passion is positively related to funding success in the context of business plan presentations to VCs. Kirsch and his colleagues support this finding by observing that the cognitive effort that entrepreneurs undertake is more important than the content they produce when it comes to the submission of planning documents to VCs. Mollick's results show a link between preparedness and funding success in a crowdfunding context.

The literature presented above has shown that sophisticated investors such as VCs and angel investors are aware of the positive link between an entrepreneur's passion and his success. Consequently, they include entrepreneurial passion in their investment decision making. In studies that differentiated between the affective and cognitive passion, the cognitive component was more relevant – in some instances more relevant to the point that affective passion even became insignificant. Crowdfunding investors are rational investors as they are able to identify high quality projects (Mollick, 2013). It is therefore reasonable to assume that they, too, will be affected by an entrepreneur's preparedness. If they are, then it is consequently quite likely the social process described above as Matthew effect will be set in motion, strongly increasing the likelihood of successful funding.

Conclusively, I state the following hypothesis:

H3. Higher entrepreneurial cognitive passion (preparedness) is positively related to funding success.

Chen et al., surprised by their finding that affective passion was insignificant, speculated that their sample choice played a role here. The VCs making the funding decisions were all highly educated and experienced individuals trained in public speaking. Therefore they might have been aware of the danger of over-emphasizing positive emotional expression. As VCs are professional investors they might be less impressed by an entrepreneur's expression of affective passion and enthusiasm (sometimes also labeled positive affectivity), but more by his preparedness, i.e. his cognitive passion. In contrast to VCs and angel investors, crowdfunding investors are usually inexperienced investors, thus might be more influenced by affection rather than cognition.

In addition, as Kickstarter.com employs a donation- and reward-based model of crowdfunding, investors might behave more similar to consumers. Emotions and enthusiasm for a cause play a significant role when it comes to donations (Bradshaw, 1980; Chen et al., 2009). In a crowdfunding model based on rewards and especially pre-ordering, the call for funding strongly resembles a sales pitch directed at consumers. As the return investors aim for when contributing to crowdfunding is either a reward connected to the intended outcome of the project (such as a fan T-shirt) or the outcome itself (i.e. the product or service to be created) they practically buy these rewards or outcomes. Consequently, entrepreneurs try to sell their product and the respective rewards. They do so not by highlighting the financial returns their project is going to generate, which would be of high importance for traditional investors, but by highlighting the benefits of the product or service they are going to create.

For consumers, expressed emotions can serve as organizational attributes (Sutton & Rafaeli, 1988). Since potential investors usually do not meet the crowdfunding entrepreneurs in person they have to rely on other cues. Passion expressed through positively affective project descriptions can therefore influence the image investors have of the venture and its team they are potentially investing in.

Expressed emotions have monetary significance. Smiling waitresses receive more tips and smiling nuns more donations (Bradshaw, 1980; Tidd & Lockard, 1978). Goff, Boles, Bellenger, and Stojack (1997) argue that a consumer's persuasion is enhanced when a salesperson demonstrates positive affect as opposed to negative affect and R. A. Baron (2008) proposed that passion increased an entrepreneur's persuasiveness. As entrepreneurial passion is contagious for employees (Cardon, 2008) the same might be true for consumers and investors.

As has been argued above, crowdfunding investment decision making resembles consumer decision making. In consumer decision making, affective passion has been shown to be of importance supporting the assumption that more passionate entrepreneurs will convince more buyers, i.e. investors. In addition, as crowdfunding investors are rather inexperienced investors who are not used to observe and assess a high number of project

pitches they are very likely to behave differently to traditional investors. Not being used to hearing entrepreneurs passionately presenting their ideas might likely lead to crowdfunding investors being influenced and impressed by enthusiasm. In turn, this would start off a Matthew effect rendering enthusiasm a predictor of funding success. I hypothesize the following relationship:

H4. Higher entrepreneurial affective passion (enthusiasm/positive affectivity) is positively related to funding success.

This study is conducted in a donation- and reward-based crowdfunding context. Affective passion is likely to be more relevant than cognitive passion when it comes to asking for donations. In a reward-based and especially pre-ordering crowdfunding model the funding process resembles more a sales pitch than a traditional funding pitch. As traditional investors do not seem to highly rank enthusiasm in their decision process, yet consumers do, I further propose:

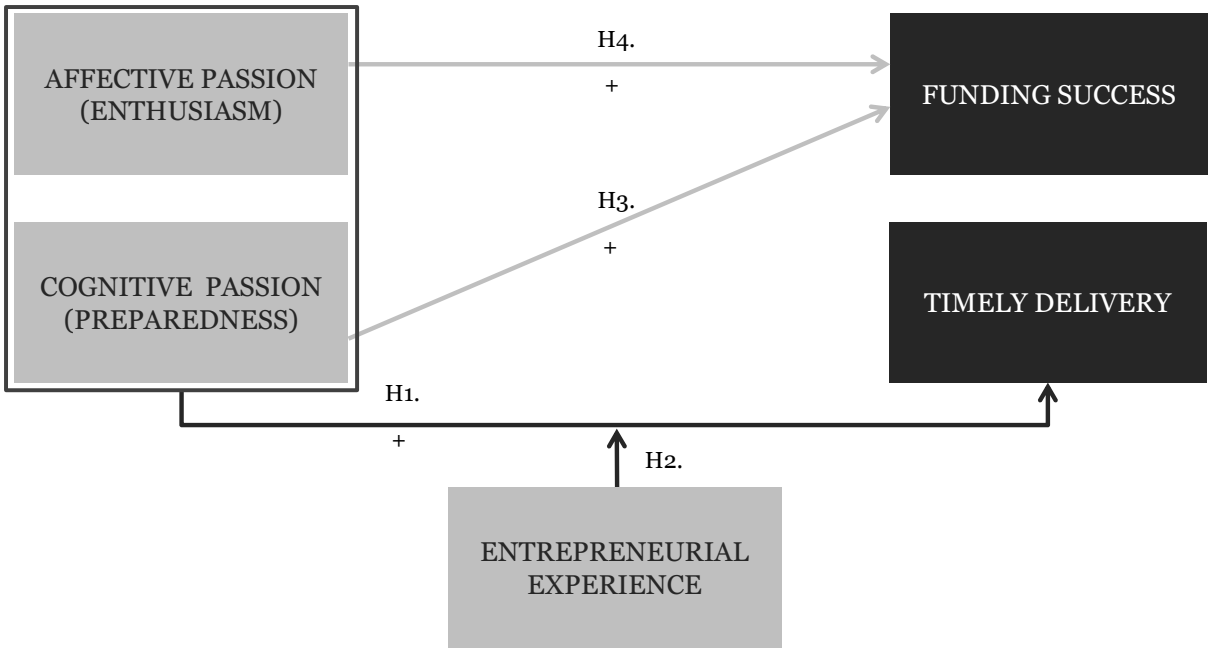
H5. Affective passion will be more predictive of funding success than cognitive passion.

I have to note that projects are not necessarily limited to one entrepreneur but can also be driven by a team. However, for the traits expressed on Kickstarter and consequently for what potential investors can perceive, this does not matter. As Sutton and Rafaeli (1988) have argued, displayed emotions can serve as organizational attributes. The question is, do investors look for these traits and use them in their funding decision?

2.2.4 Conceptual model

Figure 1 shows the conceptual model including the operationalization of each variable and the method of data collection. Both, the operationalization and the method of data collection will be detailed in the next chapter.

Figure 1 - Conceptual model



3 RESEARCH DESIGN

3.1 Methodology

To answer the research question and related sub-questions an explanatory, causal ex-post facto study design was implemented. The study is cross-sectional, in the sense that data for each case was collected at one point in time and as each crowdfunding campaign in the sample was completed. The study builds upon primary data collected directly from the sampled crowdfunding platform, Kickstarter.com. Hierarchical logistic regression was applied for both binary dependent variables, timely delivery and funding success. Logistic regression helps understand what factors influence whether the funding of a project will be successful and whether the project will deliver on time. The hierarchical approach allows assessing whether a block of predictive variables performs better in explaining the variance of the binary dependent variable than the control variables alone. All of the variables were derived directly from information accessible online. The only exception is positive affectivity, which is assessed through the thesaurus-based Linguistic Inquiry and Word Count (LIWC) program.

3.2 Research setting and sample choice

This research is based on the crowdfunding platform Kickstarter.com, which, due to its success in igniting entrepreneurship, has also been the inspiration for the JOBS act in the U.S. (Franzen, 2012). It is currently the largest and most dominant of all crowdfunding platforms having raised over $900 million and funded over 55,000 projects since its launch in April 2009. On Kickstarter, reward- and donation-based crowdfunding is used to finance creative and entrepreneurial projects grouped into 13 categories: Art, Comics, Dance, Design, Fashion, Film & Video, Food, Games, Music, Photography, Publishing, Technology, and Theater. For tax purposes, Kickstarter requires project founders to be based in the US or UK, but poses no geographical restrictions on investors. Appendix A.2 displays an illustrative Kickstarter project highlighting major elements.

Creators (as Kickstarter refers to its project initiators) are almost free to propose any project they want. Kickstarter only imposes a small number of restrictions, one of them being that the crowdfunding initiative needs to be a project with explicitly specified goals, start and end dates. Excluded are crowdfunding for charities, causes and general business expenses. Founders can choose the funding goal they wish to secure and the funding period, which usually ranges from 30-60 days. Founders are encouraged to write a thorough project description and to provide videos, pictures and frequent updates throughout the funding period. In addition, founders define different reward categories. For a certain amount an investor contributes he receives a pre-defined reward, which can range from a simple recognition as a backer, over tangibles such as a fan t-shirt or the product to be created, to special versions of that product combined with preferred treatment and involvement in the product's design. Founders need to choose the funding goal wisely as the fundraising model is "all or nothing" (Etter et al., 2013). Once the deadline is reached the funding goal has to be achieved, otherwise the project is considered a failure and no money is exchanged. If the amount pledged is at least as high as the funding goal, all of the investors' money including the excess funds is transferred to the project founder, while Kickstarter keeps a fee for itself.

Kickstarter provides an ideal setting for this research and the related research questions. Although it includes elements of donation-based crowdfunding, on Kickstarter investors are largely remunerated with tangible, non-financial rewards. In addition, the setup of the Kickstarter platform captures the conceptual model and grants access to the necessary data (see Section 3.4). Of all categories, Kickstarter's Design projects are an especially attractive sample with regard to this study for two main reasons. Firstly, in the Design category tangible products are to be created. Kickstarter therefore requires founders to commit to a delivery date before the launch of their crowdfunding campaign. Once the project is finished it is usually possible to assess whether the founder was able to deliver as promised, or whether delivery was delayed. Secondly, design projects are attractive because they minimize the importance of donations and focus mostly on pre-ordering as a reward form. It is therefore as close as possible to pure reward-based crowdfunding, the crowdfunding model this research aims to investigate. I chose to limit my sample to projects of the Design category that ended between 29th August and 30th September 2013 which provided a list of 255 projects, once I deleted a project that was created as a test from the sample. For projects that ended at the 30th of September at the latest, there was a high chance that their promised delivery date had already passed at the date of data collection allowing me to assess whether any delays had occurred.

3.3 Data collection

Data was extracted directly from the Kickstarter website. While they remain online and accessible, Kickstarter limits the visibility of past projects, especially of unsuccessful ones. These projects can either be accessed directly via their respective URL, by searching for the project name or via the project founder's Kickstarter profile. As this would not be a practical approach and most likely would not yield a balanced sample I used the website Kickspy.com to search for past Design projects. By means of scraping Kickspy.com tracks and stores all information of the universe of Kickstarter projects. Thus, it also stores all past projects, which can easily be accessed through the built-in search and filter function. I used this filter

function to gather the original Kickstarter project URLs for each Design project, both successful and unsuccessful, that ended between 29th August and 30th September 2013.

I used the web scraping software Helium Scraper to collect most of the required information directly from the Kickstarter website. Some information was collected and coded manually. After having identified the founders with multiple projects I manually collected and coded previous experiences that each founder had. After that, I gathered the information whether the successful projects were delivered on time as planned and promised. By considering information available in updates and comments I tried to assess whether successful projects delivered on time. This was possible for most of the successful projects. I also used Helium Scraper to download the text of the project descriptions, which was then analyzed using Linguistic Inquiry and Word Count (LIWC).

3.4 Variables, measures and sample statistics

Compared to traditional investors, crowdfunding investors usually do not get to meet the project founders personally. They have to rely upon signals of passion visible on Kickstarter.com. These are mainly the language and style used to present the project, the effort displayed by posting many updates, etc. While these sources enable the expression of affective and cognitive passion they do not allow for the observation of behavioral passion (commitment) of entrepreneurs. Thus, the variables regarding passion are based on expressed passion, which has to be differentiated from the passion experienced by the entrepreneur and passion, as it is actually perceived by investors. I have to note that, even though passion is assessed through information created at the beginning of the project, it is likely to stay the same throughout the project, as passion is stable rather than temporary (Cardon, Wincent, et al., 2009). Following, I will present the variables used in the analyses testing my hypotheses.

Funding goal

The funding goal is the amount the founder seeks to raise through crowdfunding. As described above, it is crucial to set it realistically. Setting it too high risks that the goal is not

achieved completely and no money is transferred. If set too low, the money raised might not be enough to ensure effective implementation of the project resulting in delay or non-delivery. Since part of the projects were from UK-based founders I had to convert the currency to USD using the exchange rate of 1 British pound = $1.6207. The average funding goal was at about $25,000 and ranged from $162 to $300.000.

Funding duration

The funding duration is the timeframe during which investors can pledge money to a project. Kickstarter allows durations from 1 to 60 days, but recommends 30 days. A shorter funding duration might increase pressure on potential investors and influence funding success (Kuppuswamy & Bayus, 2013). Funding duration averaged 35 days.

Funding success

Basically, there are two ways to measure funding success: Either as a binary variable, indicating whether the predefined funding goal was reached, or as the ratio between the achieved funding and the funding goal.

I chose to use the binary variable funding success as the independent variable instead of the continuous funding success ratio variable for a number of reasons. First, Kickstarter employs an "all or nothing" crowdfunding model. In this model, all money pledged is lost to the entrepreneur if the predefined funding goal is not achieved. Therefore, the achievement of the funding goal is of higher priority than what an entrepreneur can achieve on top of his original goal. In addition, projects usually set the funding goal in a way that development costs are covered and a minimum scale for mass production (if applicable) is achieved. Of course, it is attractive to oversell (especially when pre-ordering applies) but once development and production is financed, products can later be sold over other channels than crowdfunding. This way of measuring success also allows for comparisons to the results found by studies investigating the role of passion in other investment contexts, where funding usually is also measured through a dichotomous variable. In this sample, 45% of all projects were successful.

Funding success ratio

The funding success ratio measures how much of the funding goal has been achieved and ranges from 0% to well above 3,000% in my sample. On average the success ratio was at 179% for all projects, 380% for successful and 16% for non-successful ones. Especially the funding success ratio of successful projects is in stark contrast to what has been found before. Kuppuswamy and Bayus (2013) report that more than half of the successful projects remained within 110% of their initial funding goal. Mollick (2013) reports statistics by category, showing that on average Design projects tend to have a significantly higher funding success ratio. This high rate of over-funding might be explained by the pre-ordering nature of most Design projects. In other categories, overfunding might not benefit the investor as much as it does in pre-ordering. In a crowdfunded movie, for instance, the movie will be produced whether the funding is successful at 100% or 300%. There is no difference for the investors, i.e. there is no incentive for over-funding. If investors are pre-ordering products, they are incentivized to invest as much as is necessary to buy the product. If many investors want to buy the product, over-funding is likely to happen.

Timely delivery

In Kickstarter's Design category, project founders need to commit to an estimated calendar month in which they promise to deliver rewards. Each reward category can have a different delivery date. Founders have to define the estimated delivery date at the inception of the project and it cannot be changed later. The binary variable timely delivery measures whether a project delivered as promised or not. For some projects the delivery date lay in the future, and some projects did not show a clear indication as to whether delivery was as scheduled, which resulted in a number of missing values. Of all 90 projects that I was able to code 54% delivered late – a figure considerable lower than Mollick's reported 75%.

Affective entrepreneurial passion/enthusiasm

The perceivable, i.e. expressed or displayed, affective entrepreneurial passion is measured through the LIWC variable positive emotions. LIWC links each word to over 80 different categories. After the analysis the program publishes a score of each category, including

positive emotions. This score is derived through the ratio between total word count of the text and words that are linked to positive emotions (Pennebaker, Francis, & Booth, 2001; Tausczik & Pennebaker, 2010). It ranges from 0% to theoretically 100%. Positive emotions measures the use of words related to positive emotions and expresses the degree of immersion (Holmes et al., 2007; Tausczik & Pennebaker, 2010). It therefore reflects well the positive affectivity related to affective passion. An average project description contained 3.9% words expressing positive emotions.

Cognitive entrepreneurial passion/preparedness

Early updates

A founder's preparedness can easily be perceived through the number of early updates he provides to (potential) investors. Kickstarter encourages project founders to post project updates soon after the launch as they are a clear signal of a prepared founder. The majority of investors tend to pledge money in later stages of the funding process (Kuppuswamy & Bayus, 2013), thus there is no conflict of causality.

Early updates have been defined as project updates posted by the founder within the first 10% of the funding duration time. For an update to be classified as an early update in a project with 60 days of funding it therefore has to have been posted within the first 6 days. 116 of the 255 projects provided early updates, with an average of .74 per project and a maximum of 6.

Risk analysis

Another potential sign of a prepared founder is how thoroughly he analyses risks and challenges in advance. If an entrepreneur identifies and assesses risks and challenges in advance, he or she is able to come up with contingency plans and better handle problems that occur (Dey, Tabucanon, & Ogunlana, 1994). Each Kickstarter project has a section dedicated to the textual presentation of challenges and risks. A longer risk assessment indicates a more prepared entrepreneur. The logic is that a longer risk assessment appears to be more thorough and that the entrepreneur put more cognitive effort into its writing.

Therefore, the word count of the Risks and Challenges section on Kickstarter.com serves as a proxy to the due diligence of risk analysis and management.

Pictures

Next to providing a video, which 90% of projects do, entrepreneurs can also include pictures into their project description. There is no limit as to how many images can be uploaded into the project description. Pictures can be photographs, e.g. of product prototypes, rendered images, e.g. of how the project could look like in the end, drawings, e.g. sketches of the product, tables, e.g. to graphically depict the project plan, or small images to increase the visual attractiveness of the project description. The provision of a picture signals preparedness and cognitive passion. Either, the entrepreneur creates the pictures himself, e.g. by taking a photograph or by digitally rendering an image. To do so, the entrepreneur has to think about what he wants to display, how he wants to display it and then create the image. Obviously, there is cognitive effort involved. Instead of creating an image himself, the entrepreneur can also use existing ones. Also in that case, cognitive effort is involved as the entrepreneur needs to define what he wants to depict, search for adequate images, decide among multiple options, etc. The more images an entrepreneur includes, the more cognitive effort is involved and the higher his cognitive passion and preparedness appears to be. In total, 96% of projects used pictures with an average of 13 pictures per project and a maximum of 68.

Entrepreneurial experience

Entrepreneurial experience was measured as the number of successfully funded projects a founder managed to create prior to the project in the sample. Particularly for the analysis regarding delivery, it is important that only successful previous experiences were considered. Only in successful projects delivery is required and learning can take place. Only 24 project founders had previous successful experiences, with an average of .15 per founder for all projects and a maximum of 4.

Social network size

Kickstarter's platform provides founders with the option to connect a Facebook account to their Kickstarter account. Since social networks play an important role in funding new ventures it is not surprising that the size of a founder's Facebook network, measured as number of friends, helps predict his success (Mollick, 2013). 144 projects were connected to a Facebook account, with an average of 433 friends.

Reward categories

The rewards serve as a non-monetary payback to investors. The number of different rewards promised to investors, represented by the number of reward categories, is an interesting variable. With a rising number of rewards investors can choose from their interest might be influenced. Simultaneously, complexity might increase challenging delivery. The average project offered 9 different rewards to its investors, ranging 1 from to 51.

4 DATA ANALYSIS AND RESULTS

4.1 Control variables

The focus of this research is entrepreneurial passion and how it is related to funding success and timely delivery. Therefore, I controlled for a number of other effects that potentially play a role for both dependent variables. Regarding delivery, it has been shown that chances for being on schedule get reduced the larger the project is, represented by the project's funding goal. This effect is mainly due to the rising complexity of bigger projects (Mollick, 2013). Following the same logic, an increasing funding success ratio diminishes the probability of timely delivery. When a project is highly overfunded, the number of rewards the project founder has to deliver rises strongly compared to what he anticipated at project inception. I also controlled for the number of reward categories as it is likely that the increasing complexity of having to deliver many different rewards diminishes chances of a punctual delivery.

For the models that relate to the probability of successful funding I controlled for funding goal, funding duration, social network size, reward categories and entrepreneurial

experience. Not surprisingly, previous research has shown that a higher funding goal diminishes chances of successful funding (Kuppuswamy & Bayus, 2013). Owing to social effects among backers, the funding duration also has an influence on success probability (Ibid.). In addition, it has been shown that a larger social network of the founder increases his odds of securing the required funding (Mollick, 2013). Further, the number of reward categories that investors can choose from can influence a project's attractiveness (Kuppuswamy & Bayus, 2013). Finally, I also controlled for entrepreneurial experience, as past success is likely to be predictive of future success.

4.2 Data preparation

Prior to analysis, the relevant variables funding success, timely delivery, funding goal, funding duration, social network size, reward categories, entrepreneurial experience, positive affectivity, early updates, risk analysis and pictures were examined for accuracy of data entry, missing values, and fit between their distributions and the assumptions of multivariate analysis, specifically logistic regression.

The variable social network size has a considerable amount of missing values as only 55% of founders have connected Facebook accounts to their projects. This results in 116 missing values out of 255 in total. One case has a missing value in reward categories and early updates. This project was reported by Kickstarter to infringe intellectual property rights and was no longer accessible from that moment on. As the variables reward categories and early updates were collected later than the others, and after Kickstarter blocked access, these two values are missing. The case was kept in the sample because it still contained valuable information for analysis. The variable delivery has considerable 20% missing values. I was able to code 91 of the 114 successful cases, leaving 23 missing values. For the analysis of timely delivery, these cases were excluded from the analysis together with the unsuccessful projects. The distribution of these missing values can be assumed to be random. The missing values were due to the fact that in some cases it is not possible for a non-investor to assess whether a project has delivered on time or not. The models relating to timely delivery have a

cases-predictors ratio of 11.4:1, satisfying the recommended minimum of 10:1. The ratio between valid cases and predictor variables is at 15.4:1 for the models relating to funding success.

Table 1 - Means, standard deviations and correlations: Timely delivery

	VARIABLES	MEAN	S.D.	1	2	3	4	5	6	7	8
1	timely delivery	-	-	1							
2	funding goal	17.70k	32.09k	-.17 *	1						
3	success ratio	4.07	5.94	-.07	-.05	1					
4	reward categories	10.18	7.24	-.13	.48 ***	-.03	1				
5	positive affectivity	4.00	1.49	.12	-.03	-.05	-.01	1			
6	early updates	1.13	1.29	-.16 *	.23 **	.06	.24 **	-.11	1		
7	risk analysis	135.46	80.93	-.13	.15 *	.05	.19 **	-.11	.16 *	1	
8	pictures	14.93	10.42	-.11	.28 ***	.19 **	.25 ***	-.17 *	.44 ***	.24 **	1
9	entrepreneurial exp.	.24	.68	.09	-.11	.16 *	-.06	-.05	-.09	.04	.07

n = 91;*p<.1; **p<.05; ***p<.01

The search for univariate outliers, defined as at least three standard deviations away from the mean (z value ≥ 3), delivered 41 values, which upon closer inspection were confirmed as genuine observations as no data entry or measurement errors were responsible. In a sample of 255 cases and multiple variables 41 potential outliers represent less than 2% of total values. In logistic regression analysis the detection of influential cases is more appropriate than the detection of outliers (Jennings, 1986). Therefore, the decision was made to keep them in the sample. To identify influential cases and multivariate outliers, Cook's Distance and the standardized residuals were calculated for each case. None of the cases had a value for Cook's Distance larger than one, which, according to Hosmer Jr, Lemeshow, and Sturdivant (2013) would indicate an influential case. Also, none of the cases reported a standardized residual larger than 3.3, the limit for multivariate outliers suggested by Tabachnick, Fidell, and Osterlind (2001).

Table 2 - Means, standard deviations and correlations: Funding success

	VARIABLES	MEAN	S.D.	1		2		3		4		5		6		7		8		9	
1	funding success	-	-	1																	
2	(log) funding goal	4.05	.60	-.19	**	1															
3	funding duration	34.19	9.45	.03		.12	*	1													
4	(log) social network size	2.43	.48	.33	***	.02		-.09		1											
5	reward categories	9.50	6.52	.20	**	.26	***	.11	*	.27	***	1									
6	entrepreneurial exp.	.14	.55	.24	**	-.06		.03		.02		-.05		1							
7	positive affectivity	3.83	1.43	.01		-.09		-.14	**	.11		.11		-.04		1					
8	early updates	.69	1.10	.36	***	.18	**	.13	*	.12	*	.27	***	-.05		-.17	**	1			
9	risk analysis	140.74	95.61	-.17	**	.22	***	.16	**	.00		.21	***	-.01		.05		.06		1	
10	picture count	12.73	9.23	.22	***	.37	***	.27	***	.10		.34	***	.12	*	-.02		.34	***	.28	***

n = 139; **p*<.1; ***p*<.05; ****p*<.01

Further, the Box-Tidwell procedure was performed to test the linearity assumption of logistic regression analysis (Box & Tidwell, 1962). The results indicated that funding goal and social network size were not linearly related to the logit of funding success. Subsequently, logistic transformation was performed on both variables. As a consequence, all variables fulfilled the requirements of linearity and homoscedasticity. As logistic regression, contrary to linear or multiple regression, does not require multivariate normally distributed predictor variables, this was of no concern. Logistic regression further assumes the absence of multicollinearity among predictors. To test for that, I ran collinearity diagnostics and checked the respective correlation tables (see Table 1 and 2). None of the independent variables show a correlation larger than .7, indicating that multicollinearity is not present.

4.3 Results: Timely delivery

To test the hypotheses related to timely delivery, H1 and H2, I ran a 3-step hierarchical logistic regression (see Table 3). None of the cases included in the analysis showed a studentized residual greater than 2.5, a further sign of potential outliers. Consequently, no cases were excluded from the analysis.

First, I only included the control variables funding goal, funding success ratio and reward categories (Model 1). Neither of the control variables nor the model in total was significant (funding goal: B = .00; p > .1; funding success ratio: B = -.03; p > .1; reward categories: B = -.02; p > .1; Model 1: $\chi^2(3) = 3.796$, p > .1). Model 1 explained 5.5% (Nagelkerke R^2) of the total variance. Next, the predictor variables positive affectivity, early updates, risk analysis and pictures were added to the regression (Model 2). Hypothesis H1 was not supported as neither of them was significant for explaining the variance in timely delivery (H1: positive affectivity: B = .14; p > .1; early updates: B = -.20; p > .1; risk analysis: B = -.00; p > .1; pictures: B = .01; p > .1). Also, this model was not significant (Model 2: $\chi^2(7) = 6.675$, p > .1) and explained 9.5% (Nagelkerke R^2) of the variance in timely delivery.

Table 3 - Logistic regression: Timely delivery

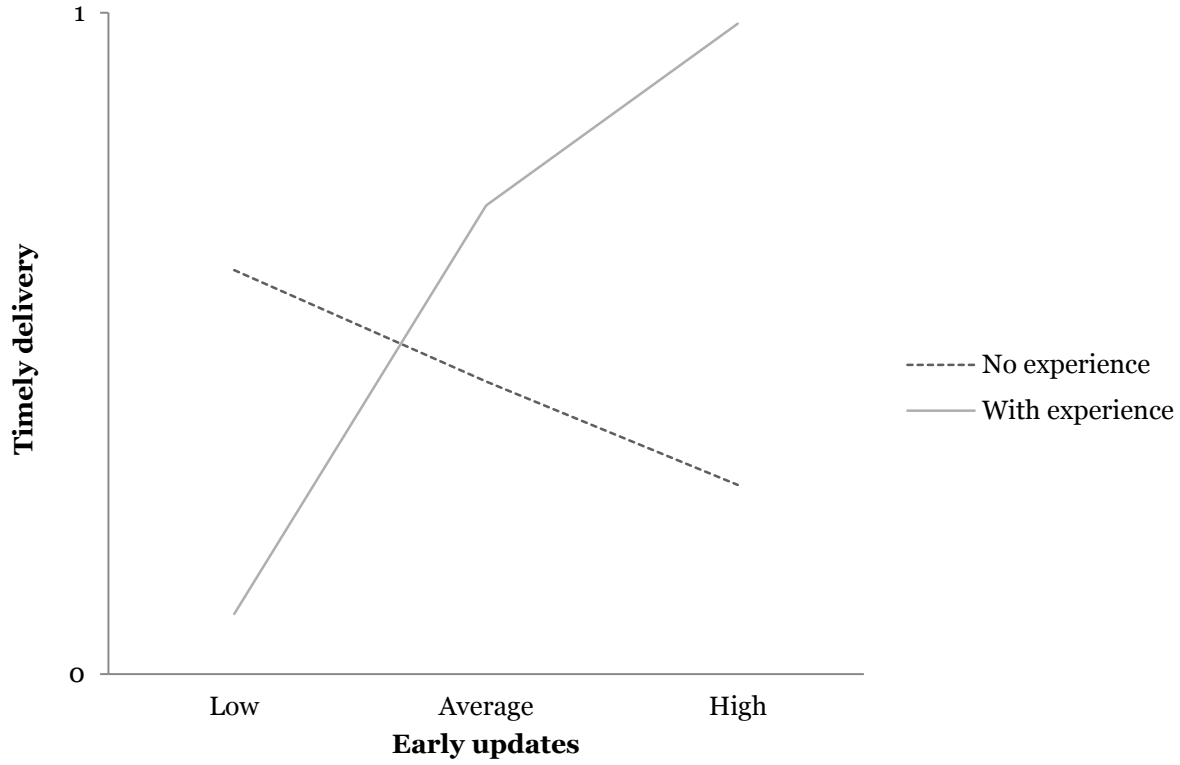
	MODEL 1		**MODEL 2**		**MODEL 3**	
VARIABLES	*(control variables only)*		*(with passion variables)*		*(with interaction variables)*	
	B	**S.E.**	**B**	**S.E.**	**B**	**S.E.**
constant	.31	.43	.06	.90	.77	1.00
funding goal	.00	.00	.00	.00	.00	.00
success ratio	-.03	.04	-.02	.04	-.05	.05
reward categories	-.02	.04	-.02	.04	-.05	.05
positive affectivity			.14	.15	.08	.17
early updates			-.20	.20	-.37	.25
risk analysis			-.00	.00	.00	.00
pictures			.01	.03	-.00	.03
positive affect. x entr. exp.					-.69	.61
early updates x entr. exp.					4.77 *	2.89
risk analysis x entr. exp.					-.05	.06
pictures x entr. exp.					.40	.37
n	91		91		91	
chi²	3.80		6.68		26.25	
p	.28		.46		.01	
Pseudo R^2 (Nagelkerke)	.06		.10		.34	

*p<.1; **p<.05; ***p<.01

Finally, I added the variables that related to the interaction of the four predictor variables and entrepreneurial experience (Model 3). This model was significant (Model 3: $\chi^2(11) = 26.252$, p < .01) and explained 33.5% (Nagelkerke R^2) of the variance. The results

partially support Hypothesis H2. Only one of the four interaction terms was found to be significant (H2: positive affectivity x entrepreneurial experience: B = -.69; p > .1; early updates x entrepreneurial experience: B = 4.77; p < .1; risk analysis x entrepreneurial experience: B = -.05; p > .1; pictures x entrepreneurial experience: B = .40; p > .1), partially confirming entrepreneurial experience's role as a moderator. The odds ratio for the interaction variable of early updates and entrepreneurial experience indicates that for each 1-point increase of the interaction variable the project is 118-times more likely to be delivered on time. For an extended table including all odds ratios and more information on the classification prediction capabilities of the models, refer to Appendix A.3 (Table 6).

Figure 2 - Interaction plot: Timely delivery



The interaction plot (see Figure 2) shows an enhancing effect that entrepreneurial experience has on the relationship between early updates and timely delivery. Without entrepreneurial experience, the relationship between early updates and timely delivery is insignificant and negative. With entrepreneurial experience, this relationship is significant and positive.

4.4 Results: Funding success

To test hypotheses H3, H4 and H5 I ran another hierarchical logistic regression, this time with two steps (see Table 4). After the first run of the analysis, three cases reported studentized residuals of over 2.5, indicating them as possible outliers. Closer inspection showed no irregularities or data entry errors and removal of these cases only slightly increased the percentage accuracy in classification of the final model by .2% to 80.1%. Not surprisingly, the total variance explained rose to 61.1% (Nagelkerke R^2). Due to the very limited increase of correct predictions and the general dubiety of outlier deletion, the cases were retained in the analysis.

Table 4 - Logistic regression: Funding success

	MODEL 4		**MODEL 5**	
VARIABLES	*(control variables only)*		*(with passion variables)*	
	B	**S.E.**	**B**	**S.E.**
constant	-1.71	1.92	.58	2.27
(log) funding goal	-1.04 ***	.36	-1.63 ***	.49
funding duration	.02	.02	.01	.03
(log) social network size	1.63 ***	.50	1.73 ***	.58
reward categories	.09 **	.04	.09 *	.05
entrepreneurial exp.	1.55 **	.70	1.74 **	.87
positive affectivity			-.05	.16
early updates			.92 ***	.30
risk analysis			-.01 **	.00
pictures			.07 **	.03
n	139		139	
chi²	39.13		72.01	
p	.00		.00	
Pseudo R^2 (Nagelkerke)	.33		.54	

*p<.1; **p<.05; ***p<.01

In the first step, only the control variables (log) funding goal, funding duration, (log) social network size, reward categories and entrepreneurial experience were included (Model

4). All controls were significant except for funding duration ((log) funding goal: B = -1.04; p < .005; funding duration: B = .020; p > .1; (log) social network size: B = 1.63; p < .001; reward categories: B = .09; p < .05; entrepreneurial experience: B = 1.55; p < .05). As anticipated, (log) funding goal had a negative influence on the probability of successful funding. This model was significant (Model 4: $\chi^2(5) = 39.128$, p > .0005) and explained 32.8% (Nagelkerke R^2) of the variance.

In the second step (Model 5), the variables of interest were included. The model significantly (Model 5: $\chi^2(9) = 72.088$, p > .0005) explained 54.2% (Nagelkerke R^2) of the variance of funding success. In partial support of hypothesis H3, early updates and pictures were positively and significantly related to funding success. Risk analysis showed a small but significant negative influence on funding success probability (H3: early updates: B = .92; p < .005; risk analysis: B = -.01; p < .05; pictures: B = .07; p < .05). The respective odds ratio indicates a 2.5-times higher probability of funding success in case the project founder publishes one additional early update. Similarly, one additional picture increases the odds of successful funding by a factor of 1.1. In contrast, each word less in risk analysis increases the chances of successful funding by 1.01. Hypotheses H4 and H5 were not supported as positive affectivity was not significant (H4: B = -.05; p > .1). The strongest predictor of funding success was found to be entrepreneurial experience with an odds ratio of 5.7. For an extended table including all odds ratios and more information on the classification prediction capabilities of the models, refer to Appendix A.4 (Table 7). Overall, the analyses yielded mixed results partially supporting two out of five hypotheses.

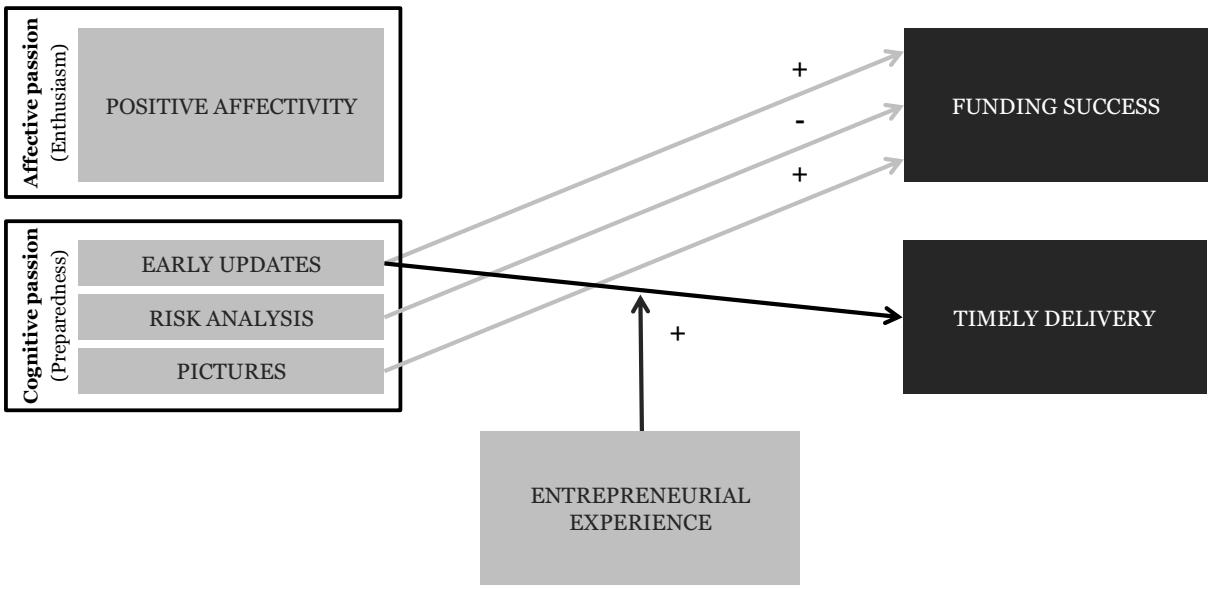
5 DISCUSSION

Passion is most central to entrepreneurship. What role does passion play in crowdfunding, an alternative way of new venture finance? Do seemingly passionate entrepreneurs perform better to subsequently deliver more punctual? Do investors take an entrepreneur's passion into account when making investment decisions? And if yes, what is more important, enthusiasm or preparedness? In this study I have examined the above questions in the

setting of the currently most dominant crowdfunding platform. Results are mixed (see Figure 4). The conceptual differentiation between affective and cognitive passion has been supported. The findings indicate that passion overall does not increase the likelihood of a project to deliver on time. If, however, a successful and experienced crowdfunding entrepreneur demonstrates preparedness through early updates, the likelihood of timely delivery increases dramatically. Surprisingly, if the same entrepreneur demonstrated enthusiasm or expressed preparedness through the provision of many pictures or a lengthy risk analysis, the likelihood of a timely delivery would not be affected. The previous literature has established a passion-performance link, but generally failed to differentiate between affective and cognitive passion.

Crowdfunding investors are not impressed by affective passion, nor do they let it affect their decision making. If, on the other hand, an entrepreneur signals cognitive passion by posting early updates and pictures, investors acknowledge it through being more likely to fund the venture. These findings support the notion that crowdfunding investors are rational.

Figure 3 - Results: Significant relationships



5.1 Passion and timely delivery

In my analysis on whether passion helps entrepreneurs overcome barriers to a timely delivery, neither affective nor cognitive passion variables were significant. When people think of passion, it is usually the affective component, enthusiasm, that comes to mind first. Despite the strong link established in the literature between passion and several new venture performance indicators, affective passion was found to be unrelated to timely delivery. Possibly, there is a difference between the passion expressed and the actual passion experienced by the entrepreneur. By applying impression management, a rather impassionate entrepreneur might appear to be very enthusiastic. Thus, even though an entrepreneur appears to be passionate because of his affective project description, in reality he might not be passionate at all. Impression management is an essential tool to many entrepreneurs (Bird & Jelinek, 1988) and can also be used in online environments (Winter, Saunders, & Hart, 2003). In addition, if in fact a passionate description was used as a tool of impression management and persuasion, then it is also quite plausible that some entrepreneurs tend to "overpromise", including being too optimistic regarding delivery times, and were eventually not able to live up to their promises.

Despite having had the opportunity to learn from past successes, an experienced entrepreneur expressing affective passion is not more likely to deliver on time. A possible explanation is that a positive affective project description published by an entrepreneur with previous successful experience is a sign of overconfidence and optimism. Overconfidence and optimism harm new venture performance (Hmieleski & Baron, 2009; Trevelyan, 2008), thus being too confident and optimistic can negate the potentially positive effect of previous experience. Entrepreneurial experience was operationalized as successful previous Kickstarter campaigns. While previous unsuccessful experience can decrease over-optimism (Ucbasaran, Westhead, Wright, & Flores, 2010), successful experience is likely to confirm an entrepreneur's level of optimism. This speculation is supported by the findings of Ucbasaran and his colleagues: Serial entrepreneurs, i.e. the ones that start more than one venture, do not adjust their over-optimism after failure. Their optimism tends to remain at the same

level. If failure does not decrease their optimism, success will be even less likely to have a negative impact on optimism. Thus, they overpromise and later struggle to deliver on time. As a result, the interaction between an entrepreneur's positive affectivity and entrepreneurial experience is not significantly related to funding success.

At first sight, it is more difficult to explain why the passion variables referring to preparedness are not related to timely delivery. Posting early updates, choosing or making pictures, and writing a lengthy risk analysis requires cognitive effort. Therefore, it is harder to fake cognitive passion as it is to fake affective passion. Or, put differently, faking cognitive passion actually leads to preparedness, i.e. cognitive passion. Still, the reason might again lie in the operationalization of passion and the difference between what an entrepreneur expresses and what he actually experiences. Providing pictures in the project description is a one-time effort. Although passion tends to remain stable (Cardon, Wincent, et al., 2009), the one-time effort of creating or selecting pictures might not be a good indicator of true, and therefore, lasting entrepreneurial passion. Comparable to pictures, the writing of a risk analysis might rather be a one-time activity than an ongoing effort. In addition, a longer risk analysis requires more cognitive effort to write than a shorter one, but a thorough risk analysis need not necessarily be a long one. Further, the presentation of risks might also be subject to impression management. This research indicates that a lengthy risk analysis scares investors away and entrepreneurs might be aware of that. Conclusively, the variables risk analysis and pictures represent expressed cognitive passion, but might not accurately measure cognitive passion experienced by the entrepreneur.

To have an effect on the odds of timely delivery, an entrepreneur must truly be passionate, and not only create the impression. Early updates seem to better capture true passion. Not surprisingly, the number of updates posted within the first 10% of the funding period (early updates) significantly (Model 6: $F(1, 252) = 175.526$, $p < .0005$) explains considerable 41% of the variance of the number of total updates posted during the whole funding period (I ran an additional linear regression analysis, see Appendix A.3). The number of early updates therefore seems to predict the ongoing effort the entrepreneur will

invest in the project. Thus, this variable captures the real cognitive passion of an entrepreneur well.

A possible explanation for the insignificance of early updates might be found through a closer look at the sampled crowdfunding model. Crowdfunding entrepreneurs using Kickstarter's Design category have to stick to the delivery date and product that they committed to in the beginning of their project. Entrepreneurs that are backed by traditional investors do not have that restriction. They can, and often have to, change business plans, pivot to new products and business models, adapt to altering conditions, etc. (Delmar & Shane, 2003; Kirsch et al., 2009; Shah & Tripsas, 2007). Owing to dynamic environments and necessary adaptations, the value of business planning for new ventures is questionable (Castrogiovanni, 1996; Honig, 2004). Consequently, it is very difficult to accurately estimate a delivery date. Committing to a late delivery date might scare investors away, while committing to a delivery date set too early might leave investors unsatisfied.

Adding to this predicament, crowdfunding entrepreneurs are unable to foresee how successful their campaign will be. Consequently, when they launch a project, they cannot know whether their campaign will sell 100 products or 1,000. For their operations and logistics, this makes a huge difference, since the estimated date of delivery is not affected by the project's success. Considering this, it appears that the required commitment to an estimated delivery date at project launch is little more than guesswork, even if based on thorough analysis. Owing to the high variability in project success, the increased effort of passionate entrepreneurs seems to not be enough to offset the growing number of rewards they have to deliver. This speculation is supported by the findings regarding funding success. Entrepreneurs expressing preparedness through early updates tend to receive more funding. Thus, their obligations increase as the number of investors increases.

A prediction of the success of a campaign that is at least to some degree accurate can only be made by an entrepreneur who has managed successful crowdfunding campaigns in the past. Furthermore, previous learning also strengthens possible beneficial effects of business planning (Brinckmann, Grichnik, & Kapsa, 2010). It is therefore not surprising that

the combination of entrepreneurial experience and preparedness expressed through early updates is positively related to timely delivery, while preparedness alone is insignificant.

In contrast to early updates, the interaction terms between entrepreneurial experience and pictures respective risk analysis were not significantly related to timely delivery. Based on the discussion above, this is not a surprising finding. Overall, the results stress the difference between experienced and expressed passion of an entrepreneur and indicate that early updates is an effective operationalization of both experienced and expressed passion.

5.2 Passion and funding success

In the second analysis, I looked at whether investors take into account a crowdfunding entrepreneur's enthusiasm (affective passion) or preparedness (cognitive passion) when making investment decisions. Results showed that affective passion does not seem to have an influence on crowdfunding investors' decision making. Preparedness, on the other hand, does have an influence. The results resemble the findings of Chen et al. (2009) and Cardon, Sudek, et al. (2009). Both studies confirmed the importance of cognitive passion for investors. In contrast to this study, they looked at sophisticated investors: Chen and his colleagues investigated the role of passion for VC funding, while Cardon et al. looked at angel investing. Both studies also found that affective passion either had no influence, in the case of VC funding, or , in the case of angel investing, only a rather complicated influence limited to the screening phase of the investment decision process.

Despite those previous findings, I hypothesized that affective passion would even have a larger impact than cognitive passion in crowdfunding. My main argument was that crowdfunding investors on Kickstarter resemble consumers more than investors. Therefore, I argued, their investment behavior should also resemble consumer behavior. Chen and his colleagues also supported my hypothesis by speculating that the reason for enthusiasm's insignificance in their study was based on their sample. All the investors were rather experienced and invested large sums, contrasting them to the crowdfunding investors in my

sample. As it turned out also in my study, preparedness, and not enthusiasm, was significantly related to funding success.

Research has demonstrated, that ad-evoked feelings are weak under high involvement and conditions that encourage cognitive elaboration (Batra & Stephens, 1994; Brown, Homer, & Inman, 1998). Highly involved audiences are more likely to engage in greater message elaboration and evaluation of advertisements and have a dampened affective response (Greenwald & Leavitt, 1984). Kickstarter project descriptions can well be labeled advertising: the project founders not only want to convince potential investors of their ability to successfully deliver, but mostly to sell their product ideas. This is especially true for the Design category which builds mainly upon product pre-ordering. However, since the products advertised on Kickstarter have to be created yet, potential buyers (and investors) need to take into consideration whether a certain project appears likely to deliver. Compared to purchasing decisions, there is more risk involved in pre-ordering through crowdfunding campaigns. Therefore, it is likely that they will be rather highly involved when deciding to invest, or buy. Consequently, they will have a dampened affective response and better analyze the message sent via the project description. They focus more on the content and substance, than on the emotional appeal of the message.

Another possible explanation, that goes hand in hand with the previous one, is that crowdfunding investors, similarly to sophisticated investors, are familiar with the concept of impression management, even if only subconsciously. Impression management is more effective if it appears to be sincere and honest, that is, if the selling effort comes with proof and substance (R. A. Baron, 1989 as cited in Chen et al., 2009). Projects with highly affective project presentations that lack attractive products or signs of preparedness of the entrepreneur might therefore appear dishonest and dubious. In general, it appears as if crowdfunding investors do not differ as much as initially anticipated from sophisticated investors in terms of what information they look for.

While all three variables relating to cognitive passion are significantly related to funding success, the relationship between risk analysis and funding success is negative.

Despite signaling cognitive effort, a longer risk analysis might also shy investors away. A long risk analysis could create the perception that a given project is very risky and, in the case of reward-based crowdfunding, not present a good investment opportunity. Usually, investors want to be rewarded with higher risk premiums for accepting increasing risk (Markowitz, 1952; Sharpe, 1964). In crowdfunding, the rewards are known upfront and are not necessarily designed to reflect the risk associated with a project. If a project is indeed very risky, and the reward does not justify the risk, a potential investor could choose to free ride. This means he would hope that others fund the project, and then order the product as a regular customer instead of pre-ordering it as an investor. That way, others, and not him, would bear the risk of default or non-delivery.

Considering the results of the analysis related to timely delivery, crowdfunding investors appear to be rational. For timely delivery, affective passion was insignificant. Crowdfunding investors do not appear to take affective passion into consideration when making funding decisions. It is imaginable that there is a potentially big gap between expressed and experienced affective passion. Also, the three preparedness variables alone were insignificant for timely delivery. On the other hand, early updates together with successful previous experience have a very strong impact on the odds of timely delivery and results also indicate that early updates are a good sign of experienced cognitive passion. Logically, both entrepreneurial experience and early updates are among the top three predictors of funding success in my model. It appears that crowdfunding investors are sensitive toward the difference between expressed and experienced passion of an entrepreneur. This notion is further supported by the finding that pictures is positively related to funding success, but a lot less influential than early updates.

6 CONCLUSION

6.1 Theoretical contributions

Cognitive, not affective passion is significantly related to funding success, while the interaction between cognitive passion expressed through early updates and entrepreneurial

experience is linked to timely delivery. The results regarding timely delivery indicate that early updates is a valid operationalization of experienced cognitive passion, whereas the other two, risk analysis and pictures, only capture expressed cognitive passion. Overall, crowdfunding investors appear to be rational as they seem to be aware of the difference between expressed and experienced passion. This study makes several contributions to the nascent crowdfunding literature, which still is an embryonic state (Mollick, 2013). Especially it sheds light on what role entrepreneurial passion plays for project success in regard to funding and timely delivery.

First, this study adds to the understanding of what factors drive delivery of crowdfunded projects. In my sample, less than 50% of projects delivered on time. To my best knowledge, this is the first study that systematically tried to explain this phenomenon. By specifically looking at passion and its interaction with an entrepreneur's experience, I was able to explain a considerable amount of the variance in timely delivery. While affective passion was irrelevant for timely delivery, cognitive passion (expressed through early updates) did play a role. Although the increased effort of cognitive passionate entrepreneurs seems to be offset by the uncertainty and underlying mechanisms of Kickstarter's crowdfunding model, it was highly relevant in interaction with entrepreneurial experience.

Second, the study contributed to the understanding of crowdfunding investment decision making by considering entrepreneurial passion as a driver of funding success. Passion has been identified to be important for investors in VC funding and angel investment contexts (Cardon, Sudek, et al., 2009; Chen et al., 2009). Apart from Mollick (2013), who looked at preparedness as a sign of project quality, this is the first study to explicitly investigate the role of passion in crowdfunding. By showing that crowdfunding entrepreneurs react to passion the same way as sophisticated investors such as VCs and business angels, I further contribute to the question whether crowdfunding is an effective way to identify high quality projects. This study also sheds light on the question whether crowdfunding investors in a context dominated by pre-ordering act like regular consumers

or whether they are influenced in their decision making through their extended role of project financiers.

Finally, this study also confirmed the conceptualization of passion as several distinct constructs. The results support the notion that there is a difference between cognitive and affective passion, and between passion as it is expressed by an entrepreneur and passion as it is really experienced by him or her. Investors seem to be aware of these differences. What is still unclear, and was also not addressed by previous studies on new venture funding that distinguished between cognitive and affective passion, is whether investors differentiate between affective and cognitive passion because the first is appears to be easier to fake.

6.2 Managerial implications

The results of this study also yield several practical implications for each of the three main parties of crowdfunding, the entrepreneurs, the investors and the platform providers.

Implications for entrepreneurs

To begin with, a number of recommendations for crowdfunding entrepreneurs can be concluded from the study's results. To convince potential investors, entrepreneurs should focus on the display of cognitive passion and preparedness, foremost through publishing early updates and using many pictures in the project description. Both tools increase the chances of successful funding. For positive emotional expression and affective passion to appear sincere and authentic, they should be coupled with substance, i.e. signals of preparedness. The risk analysis can also be used to stimulate the chances of funding. A shorter risk analysis seems to increase the odds of funding, the analysis should therefore be written as concise as possible. Completely skipping the act of thoroughly analyzing risks is not advisable and should at least be used for internal purposes. In addition, if an inexperienced entrepreneur has the chance to either work with, or learn from experienced crowdfunding entrepreneurs, he or she should do so as it can have positive effects on funding success and delivery.

Finally, it goes without saying that if an entrepreneur is passionate about something, not only are his or her chances of succeeding higher, but also the experience will be more enjoyable. If entrepreneurs want to convince investors about a project they are really passionate about, they should invest time into preparation and signal this preparation to investors.

Implications for investors

This study also has implications for investors since it analyzed what role passion plays for the likelihood of timely delivery. Results show that investors are right in focusing on preparedness rather than on affection. Especially when coupled with entrepreneurial experience, preparedness, expressed through early updates, shows strong beneficial effects on timely delivery. My advice to investors is to look for real passion. Preparedness, expressed through early updates was found to be sign of true passion. Other expressions of passion such as positive affectivity, pictures and risk analysis can be used as tools of entrepreneurial impression management. Investors should especially to consider investing in prepared entrepreneurs that show a history of successful projects.

The consideration of social information and herding behavior are justified as crowdfunding investors appear to be rational. Therefore, the results indicate that it is advisable to follow the "wisdom of the crowd" when making investment decisions.

Implications for the crowdfunding platforms

Finally, the study can also help enhance crowdfunding platforms. Increasing the percentage of successfully funded projects benefits crowdfunding platforms threefold. First, platforms such as Kickstarter only get remunerated through fees of successfully funded projects, thus their topline is affected positively. Second, the platform's appeal to potential crowdfunding entrepreneurs is increased through a higher overall success ratio. And third, attracting more entrepreneurs leads to more projects and higher diversity on the platform, which in turn will attract more investors, increasing the overall investment sums. The results support Kickstarter's practice to encourage entrepreneurs and project founders to post early updates and pictures which are all signs of preparedness. Next to encouraging the signaling of

preparedness, Kickstarter should also make sure that entrepreneurs actually do their homework before launching projects and provide guidelines regarding estimated delivery dates. In addition, entrepreneurial experience of project founders could be displayed more explicitly. Considering the importance of successful previous experience for timely delivery and its significance for investor decision making highlighting it seems reasonable. This argument is strengthened by the finding that crowdfunding investors prefer easy and less detailed access to information (Ward & Ramachandran, 2010).

6.3 Limitations and suggestions for further research

Despite promising results, this study has a number of limitations. First, this study's sample was taken from Kickstarter's Design category. It is not clear whether projects from other categories follow the same mechanisms. Projects from the Design category create tangible products, but projects from other categories are not necessarily bound to this restriction. Another limitation of the sample choice is the crowdfunding model of Kickstarter. "All or nothing" crowdfunding, the distinct design of the Kickstarter website, geographic restrictions regarding the project founders can all influence the external validity of the study and thus decrease the generalizability of its results.

Another limitation stemming from the sample choice is that this study deliberately focused on reward-based crowdfunding. This limitation becomes more severe as equity crowdfunding is expected to rise in importance (Chautin, 2013). It is reasonable to expect that equity crowdfunding and peer-to-peer lending follow, at least partially, different patterns, since the payoff for investors is so different.

Some variables in the sample had a considerable amount of missing values, especially the social network size and entrepreneurial experience. Although I do not expect a large effect of non-response bias, the higher number of observations in both of these variables would have increased validity.

Finally, the study was limited to observing expressed passion, not passion experienced by the entrepreneur or perceived by investors. Consequently, the passion

expressed in the content a founder provides on Kickstarter.com might well be a result of impression management. Also, the study did not include behavioral passion, as it is not perceivable by investors.

Future research

An interesting avenue for future research is to explore why prepared and previously successful entrepreneurs tend to deliver on time. Is it because they set the delivery dates more realistically, or is it attributable to increased effort they put into fulfilling their promises?

As they are distinct concepts, it would also be interesting to find out how experienced passion, displayed passion and passion perceived by investors are linked. This would also help understand whether impression management tactics are prevalent, or whether they are the exception. Answering that question might yield an explanation as to why investors do not look for affective passion when making investment decisions.

Another possible avenue for future research is to find out what possible mediators and moderators affect the link between passion and funding success or timely delivery. An option might be to investigate further the comments left on the project websites or on Twitter, etc.

To conclude, this study aimed at clarifying the role of passion in crowdfunding. Several variables were used to measure expressed affective and cognitive passion. The results have meaningful implications for both the academia and practitioners. Overall, crowdfunding investors appear to be rational. Results regarding funding success resemble previous studies on investment decision making of sophisticated investors such as VCs and business angels. This impression is further supported by the study's findings regarding the drivers of timely delivery of project rewards. Early updates, the variable that apparently best captured experienced passion, and not only expressed passion, was highly relevant for delivering rewards on time in the case of an experienced entrepreneur. Thus, the findings also show that passion indeed has several dimensions and distinction is reasonable. The results can inform entrepreneurs seeking capital through crowdfunding, investors trying to

identify high quality projects, and crowdfunding platform managers aiming at enhancing their business. Entrepreneurship is vital for economic growth and innovation. As crowdfunding globally gains further momentum as an alternative way of entrepreneurial finance, I encourage other researchers to shed light on crowdfunding and further develop this nascent field.

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APPENDIX

A.1 Crowdfunding literature overview

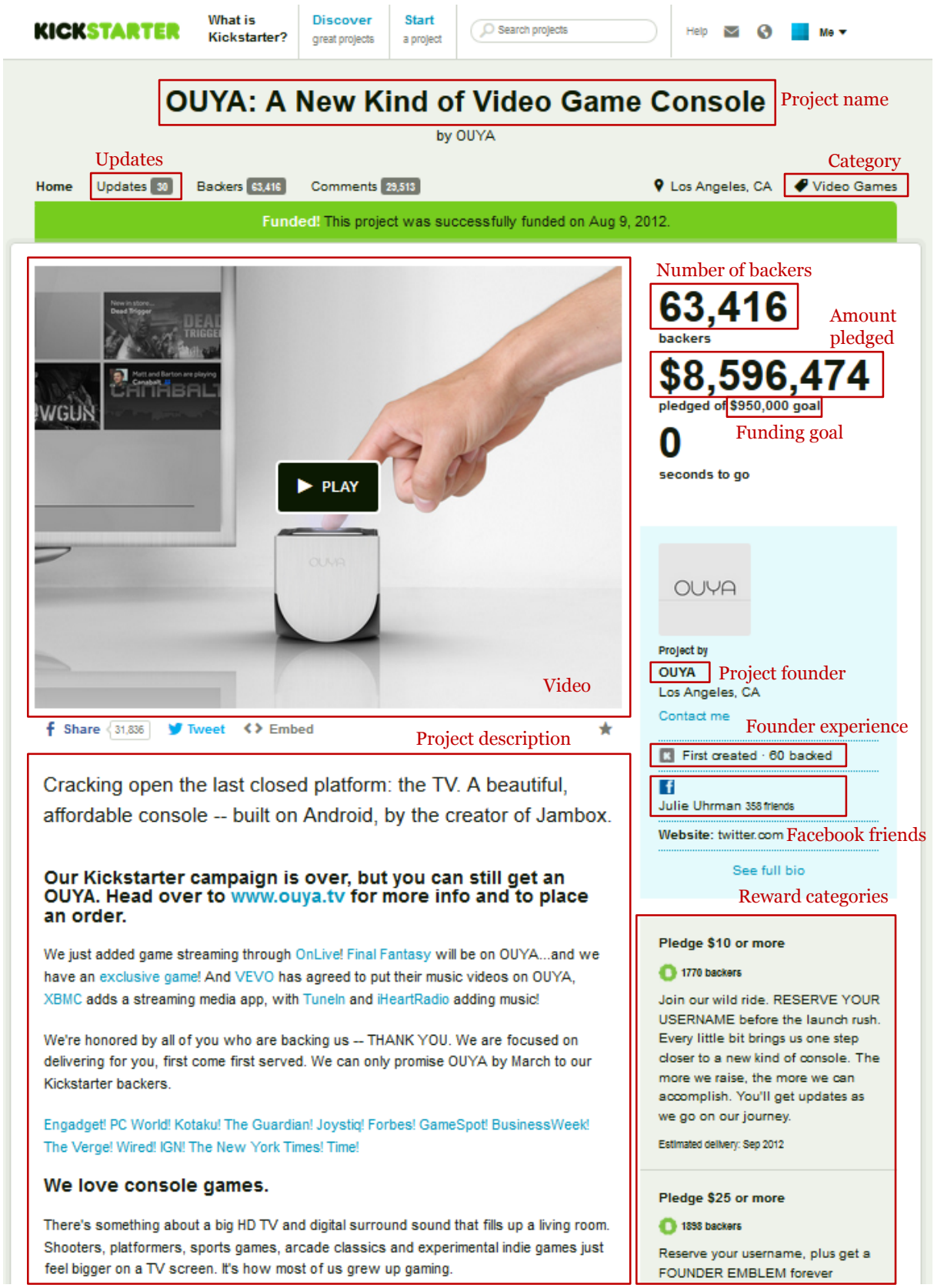
Table 5 - Crowdfunding literature overview

Authors	Focus of research	Type of crowdfunding	Type of publication	Type of research	Findings and implications
Agrawal et al. (2011)	Geography and spatial proximity	Revenue-sharing and reward-based	Working paper	Empirical	Results show a reduced role of spatial proximity as the average distance between artists (the project founders) and investors was around 3,000 miles. However, proximity still seems to play a role, especially in the beginning of the funding period as local investments tend to appear earlier than more distant investments. This highlights the role of the project founder's network, above all family and friends.
Belleflamme et al. (2013)	Crowdfunding profitability, community benefits	Pre-ordering and profit-sharing/ equity-based	Accepted paper *Journal of Business Venturing*	Conceptual	Crowdfunding (pre-ordering and profit-sharing) can be more profitable than traditional funding via banks or equity investors if the entrepreneur manages to build a supportive community. In such a context, non-monetary benefits are generated, price discrimination is possible and pre-ordering crowdfunding investors are willing to pay more than regular consumers later.
Burtch et al. (2013)	Investor contribution patterns	Donation- and reward-based (public goods)	Accepted paper *Information Systems Research*	Empirical	In the context of 100 pitches for new journalism projects investor support diminished with increasing funding. Burtch and his colleagues attributed this to a crowding-out effect common in donations for public goods. A second interesting finding was that exposure, measured as total pitch views of the project, predicted later readership, indicating that crowdfunding can be used to create awareness and attention for new projects.
Etter et al. (2013)	Prediction of funding success	Donation- and reward-based	Conference paper	Empirical	Combining predictors based on funding timing and social features such as Tweets reach an accuracy of over 76%.
Kuppuswamy and Bayus (2013)	Influence of social information (timing and previous funding) on investor behavior	Donation- and reward-based	Working paper	Empirical	Increasing funding success leads to diminishing backer support. This might be caused by diffusion of responsibility (also referred to as Bystander effect). Towards the end of a project's funding cycle investor support tends to significantly increase as the diffusion of responsibility effect gets reduced and project founders make more frequent updates with pleas for support. In general, projects either succeed by a small margin or fail by a large one.
Lambert and Schwienbacher (2010)	Drivers of crowdfunding success and crowdfunding characteristics	Donation-, reward- and equity-based	Working paper	Empirical	There is a negative correlation between the amount of passive and active investments in a project. The authors concluded that reward and control are substitutes and that investors expect a higher reward in turn for lower or no participation in the implementation of a project
Lin, Prabhala, and Viswanathan (2013)	Project evaluation criteria of investors	Peer-to-peer lending	Peer-reviewed journal article	Empirical	Higher expressed social capital of a borrower leads to a higher probability of receiving credit and lower interest rates.

Mollick (2013)	Project evaluation criteria of investors, delivery and role of geography		Peer-reviewed journal article	Empirical	Crowdfunding investors are rational investors. Results show an unexpectedly large correlation between signals of quality, such as the entrepreneur's preparedness, and funding success, confirming crowdfunding's effectiveness at identifying and promoting high quality projects. Although most projects deliver on their obligations, 75% of them deliver later than promised. The geographical project mix resembles the cultural products of the city in which they are based. For instance, Los Angeles has many film projects, Nashville many music- and San Francisco many technology-related projects. A city with a proportionally greater creative population results in a higher likelihood of success for project founders.
Ordanini et al. (2011)	Motivation of investors	Donation-, reward- and equity-based	Peer-reviewed journal article	Empirical	Motivations of crowdfunding participants vary largely. However, a common theme seems to be the enjoyment of being involved in innovative behavior.
Schwienbacher and Larralde (2012)	Crowdfunding overview	Donation-, reward- and equity-based	Textbook article	Conceptual, empirical	First description and overview of the crowdfunding phenomenon.
Ward and Ramachandran (2010)	Peer effects in contribution patterns	Revenue-sharing and reward-based	Conference paper	Empirical	Investors pay more attention to information aggregating devices like popularity lists than to more detailed sources of information. The authors assume that this is due to information overload. Investors trust the crowdfunding network's ability to filter and verify relevant information and thus reveal high quality projects.
Zhang and Liu (2012)	Project evaluation criteria of investors		Peer-reviewed journal article	Empirical	Potential lenders follow herds of other investors. Counterintuitively, the herding effect is greater for projects publicly expressing low quality. The authors argue that lenders assume that the herd has private information on the project's quality, justifying it as a rational decision.

A.2 Illustrative Kickstarter project

Figure 4 - Data collection on Kickstarter: Ouya



A.3 Extended results: Timely delivery

Table 6 - Logistic regression with extended information: Timely delivery

VARIABLES	MODEL 1 (control variables only)			MODEL 2 (with passion variables)			MODEL 3 (with interaction variables)		
	B	**S.E.**	**Exp(B)**	**B**	**S.E.**	**Exp(B)**	**B**	**S.E.**	**Exp(B)**
constant	.31	.43	1.36	.06	.90	1.06	.77	1.00	2.17
funding goal	.00	.00	1.00	.00	.00	1.00	.00	.00	1.00
success ratio	-.03	.04	.97	-.02	.04	.98	-.05	.05	.95
reward categories	-.02	.04	.98	-.02	.04	.98	-.05	.05	.95
positive affectivity				.14	.15	1.15	.08	.17	1.09
early updates				-.20	.20	.82	-.37	.25	.69
risk analysis				-.00	.00	1.00	.00	.00	1.00
pictures				.01	.03	1.01	-.00	.03	1.00
positive affect. x entr. exp.							-.69	.61	.50
early updates x entr. exp.							4.77 *	2.89	117.76
risk analysis x entr. exp.							-.05	.06	.95
pictures x entr. exp.							.40	.37	1.50
n		91			91			91	
chi²		3.80			6.68			26.25	
p		.28			.46			.01	
Pseudo R^2 (Nagelkerke)		.06			.10			.34	
% accuracy in classification		58.20			56.00			68.10	
sensitivity		41.50			39.00			63.40	
specificity		72.00			70.00			72.00	
positive predictive value		54.84			51.61			65.00	
negative predictive value		60.00			58.33			70.59	

beginning block with % accuracy in classification: 54.90; *p<.1; **p<.05; ***p<.01

A.4 Extended results: Funding success

Table 7 - Logistic regression with extended information: Funding success

	MODEL 4			MODEL 5		
VARIABLES	*(control variables only)*			*(with passion variables)*		
	B	**S.E.**	**Exp(B)**	**B**	**S.E.**	**Exp (B)**
constant	-1.71	1.92	.18	.58	2.27	.178
(log) funding goal	-1.04 ***	.36	.35	-1.63 ***	.49	.20
funding duration	.02	.02	1.02	.01	.03	1.01
(log) social network size	1.63 ***	.50	5.08	1.73 ***	.58	5.66
reward categories	.09 **	.04	1.09	.09 *	.05	1.09
entrepreneurial exp.	1.55 **	.70	4.73	1.74 **	.87	5.71
positive affectivity				-.05	.16	.95
early updates				.92 ***	.30	2.50
risk analysis				-.01 **	.00	.99
pictures				.07 **	.03	1.08
n		139			139	
chi²		39.13			72.01	
p		.00			.00	
Pseudo R^2 (Nagelkerke)		.33			.54	
% accuracy in classification		71.20			79.90	
sensitivity		64.50			72.60	
specificity		76.60			85.70	
positive predictive value		68.97			80.36	
negative predictive value		72.84			79.52	

beginning block with % accuracy in classification: 55.40; *p<.1; **p<.05; ***p<.01

A.5 Early updates and total updates

Table 8 - Means, standard deviations and correlations: Total updates

VARIABLES	MEAN	S.D.	1	2
1 total updates	6.45	7.53	1	
2 early updates	.74	1.06	.64 ***	1

n = 254;*p<.1; **p<.05; ***p<.01

Table 9 - Linear regression: Total updates

VARIABLES	MODEL 6 *(with predictor variable)*	
	B	S.E.
constant	3.07 ***	.44
early updates	4.54 ***	.34
n	254	
F	252	
p	.00	
R^2	.41	
Adjusted R^2	.41	

*p<.1; **p<.05; ***p<.01

Procedure to test assumptions of linear regression

1. Linearity of relationship concluded after visual inspection
2. Independence of observations concluded as Durbin-Watson statistic close to 2, indicating that errors (residuals) are independent
3. Four potential outliers detected (standardized residuals larger than 3.3), but left in the sample as no data entry or measurement errors were responsible
4. Homoscedasticity visually confirmed based on a scatterplot of the standardized residuals
5. Normality visually confirmed based on a normal P-P plot of regression standardized residuals and a histogram