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Is all that Glitters Gold? Exploring The Effects of Perceived Risk on Backing Behavior in Reward-based Crowdfunding

Research-in-Progress

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Abstract

Crowdfunding is gaining much attention in theory and practice. Various platforms have emerged, offering different stakeholders the possibility to raise money from an undefined group of online users. Despite the growing interest, there appears to be little understanding of what drives backers to revoke pledged funds. In this research-in-progress paper, we address this issue by drawing on perceived risk theory. Perceived risk is widely recognized as the main source of negative influence on consumers' purchasing behavior in e-commerce. Therefore, we aim at developing a theory ingrained research model that helps to analyze and understand the impact of perceived risks on backers' funding on revocation behavior in reward-based crowdfunding. Doing so, our research contributes to the body of risk theory by applying it into a new context. It helps crowdfunding intermediaries and individuals to understand potentially occurring risks, and provides them with actionable advice on how to handle them.

Keywords: Risk, risk management, consumer behavior, crowdfunding, e-business

Introduction

Billions of dollars have already been raised through crowdfunding (CF) enabling different stakeholders to realize new business ideas (Bradford 2012). The basic principle of CF is to pool money from a group of individuals instead of professional parties (Schwienbacher and Larralde 2012). CF can offer different benefits for people who seek financial support, including the fast access to capital or an initial testing of ideas (Mollick 2014). However, the term CF itself is still fuzzy. One can differentiate between four basic forms depending on the value a backer receives for his funding. In line with Griffin (2012), these forms are: (1) donation-based CF, i.e. without any reward besides benevolence, (2) reward-based CF, i.e. with non-financial rewards such as products, (3) lending-based CF, i.e. with financial returns such as interest, and (4) equity-based CF, i.e. with financial returns such as equity or dividends. CF research efforts cover

inter alia topics on the effective use of CF (Schwienbacher and Larralde 2012), different types of customers (Ordanini et al. 2011), the project-specific selection of CF platforms (Belleflamme et al. 2013) and determinants of project success and failure (Mollick 2014). However, research and practice show that the majority of current CF projects are most often realized by means of a trial and error approach, for example only following offered guidelines by the intermediary – the CF platform itself. In this research, we will focus on reward-based CF, the largest CF category in terms of overall numbers of CF platforms (Massolution 2012). In many cases, reward-based CF is a form of pre-selling (Ahlers et al. 2012) and is therefore comparable to e-commerce transactions, such as the buying process on marketplaces. This analogy enables us to apply theoretical insights from the body of e-commerce literature.

In view of this and to our best knowledge, research lacks insight into the way what really influences a backer's decision on whether or not to support a CF project financially. This, however, becomes crucial, considering particularly the increasing importance of CF as an alternative instrument of financing. Our research therefore aims at empirically investigating influential factors on the backers' first statement – *funding on revocation* – towards reward-based CF initiatives by drawing on theoretical insights into e-commerce, in particular on the theory of perceived risk. The results of our research will contribute to the theoretical understanding of CF and have practical implications, at the same time: Knowing the impact of perceived risk on *funding on revocation* behavior is a valuable insight for intermediaries and project-initiators. Thus, our approach will help to ensure the long-term efficiency and sustainability of CF in total (Burtch et al. 2013). In this research-in-progress paper we develop a research model, which will be verified empirically aiming to understand the impact of perceived risk on backers funding behavior. We developed this model from theory. In the following chapter, we will first introduce the main theory behind our research model (section two). These theoretical insights provide the basis for the development of a theoretical framework in section three. In the fourth section we will introduce the proposed methodology before finally highlighting the expected contributions to theory and practice in section five.

Theoretical Background

Setting the Path of Research

On reward-based CF platforms, backers usually are able to pledge an amount of money from the beginning until the end of a campaign, usually ranging between 30 and 90 days. During this period, a backer may revoke his pledge at any time. Considering leading reward-based CF platforms from the German market and US-market, we propose that a CF campaign consists of three general stages: *preliminary-funding stage*, *ongoing-funding stage* and *post-funding stage*. The preliminary-funding stage describes the phase before the start of a project. At this stage, a backer is not able to fund a project. At the ongoing-funding stage, backers are able to fund a project by choosing one of the provided funding levels. The reward for each funding level can rank from a “thank you” (smallest amount of money) to a project specific large reward, e.g. an assortment of all offered products. The importance of this stage lies in its specific feature to revoke the selected pledge at any time until the end of the campaign. In consequence, even projects that appear to have risen sufficient funding may fail until the end of the campaign. The post-funding stage describes the stage from the end of a campaign. At this stage, the backers are not able to revoke their pledge anymore and the project initiator is obliged to ensure that the rewards will be processed within the defined time period. In our research, we will focus on the *ongoing-funding stage* due to the fact that backers – caused by external and internal factors – can change their funding decision towards the project at any time in this phase. Thus, this option of revocation is a particularly suitable object of investigation for perceived risk theory.

Further, the term reward-based CF is commonly associated with the pre-purchase of a product in e-commerce settings (Bradford 2012) due to the fact that backers usually receive – at a discounted price – the item produced by the project initiator as a reward for their support. These rewards are, however, not limited to pre-purchases. Despite these similarities, it is necessary to state that reward-based CF differs from traditional marketplaces such as Amazon in many ways. Kickstarter itself argues, that their reward-based CF platform is not a store but rather a new way for creators and audiences to work together to make things come true (Chen et al. 2012). Before supporting a project on Kickstarter, backers should evaluate the project initiator's ability to complete the initiated project as promised and his credibility, indicated by transparency with regard to potential risks and challenges that might affect the success of the project.

Success in general is being measured by financial flows (Stuart and Abetti 1987) from the crowd and as to whether these financial contributions are sufficient to reach the aspired financial target.

To understand the funding on revocation behavior in CF settings, it is necessary to draw upon insights from research in e-commerce that helps us to identify the main factors influencing a consumer's purchase behavior. Funding on revocation differs from consumers' buying behavior, as backers act as patrons and customers at the same time, and thus have a certain interest in the success of the CF campaign (Agrawal et al. 2010; Thies and Wessel 2014). Further and due to the nature of CF, backers have less information about the funding object they are supporting. The funding on revocation process differs from the buying process, as in most cases the reward is offered at a discounted price, in a limited quantity and exclusively to the backers.

Consumer Purchase Behavior in E-commerce

Purchasing on e-commerce platforms is one of the most rapidly growing forms of shopping outpacing sales through traditional retailing (Shim et al. 2001) by increasingly offering more complex, high-end products on websites (Wells et al. 2011). E-commerce marketplaces and online consumer behavior have been subject to extensive research and debate over the last decades (e.g. Gregg and Walczak (2008); Jiang and Benbasat (2007), Yoo and Kim (2014)). In contrast to offline shopping, e-commerce channels are fully mediated by information technology, reducing the consumers' ability to assess a product's physical information adequately prior to purchase and thus creating information asymmetries (Wells et al. 2011). These information asymmetries are being classified into pre-purchase information scarcity and post-purchase information clarity (Kirmani and Rao 2000), and are strongly related to the nature of the product: search (e.g., book) versus experience (e.g., clothing) (Huang et al. 2013) versus credence (e.g., health services) (VanHoose 2011). Pre-purchase information scarcity describes the missing possibility to evaluate a product's quality attributes prior to purchase, whereas post-purchase information clarity describes the quality assessment of a product immediately after purchasing or using it (Wells et al. 2011). Thus, the quality of search products can easily be assessed prior to purchasing, based on the providers' information (Wang and Dai 2013). Evaluating the quality of experience products in advance is typically more difficult. The quality can, however, easily be evaluated after consumption (Klein 1998). Therefore, experience goods require more information based on other consumers' personal experiences prior to the purchase. For credence goods the quality can never really be assessed with certainty. Credence goods are always difficult to evaluate due to their intangible characteristics. Gupta et al. (2004) argue, that consumers are more likely to purchase search products online due to challenges in assessing the attributes of experience or credence products. Due to the lack of sound information in case of experience products (Wang and Dai 2013) as well as the lack of face-to-face communication with sellers and intermediaries, customers are facing risks (Constantinides 2004) and therefore attempt to make rational decisions based on restricted information (Pavlou and Fygenson 2006), which could lead them to not purchasing a product online (Hong and Cha 2013). Thus, understanding different facets of consumers' risks is of crucial importance. Empirical studies found that perceived risk has a direct negative effect on transaction behavior (Featherman and Pavlou 2003; Jarvenpaa et al. 2000).

Perceived Risk in E-commerce

As stated above, e-commerce leverages many benefits for consumers, sellers and other stakeholders. However, despite the fact that e-commerce provides these advantages, there are still a lot of potential customers who refuse to adapt e-commerce services due to negative concerns (Ko et al. 2004), in particular related to perceived risks (Pavlou 2003). Risks mainly occur due to information asymmetries in transactions, in which the seller usually possesses more information than the buyer (Pavlou and Gefen 2004). In general, perceived risks play a crucial role in all types of consumer behavior (Mitchell 1992). Perceived risks have first been introduced by Bauer (1960), who proposed that consumer behavior could be regarded as an instance of risk taking. He further argued that consumer behavior involves risks since any kind of consumer action will produce consequences that can not be anticipated and of which at least some are likely to be unpleasant (Hong and Cha 2013). This means that the more negative these consequences are and the less they can be controlled by the consumer, the higher the degree of perceived risk (Hong and Cha 2013). In case of online purchasing decisions, Cox and Rich (1964) extended the definition proposed by Bauer (1960) by stating that consumers perceive risks prior to making a purchase. Especially, when facing uncertainty and achieving a potentially undesirable and uncontrollable (Koller

1988) consequence as a result out of an online transaction (Dowling and Staelin 1994). The more risks occur the less likely a consumer is to purchase (Barnes et al. 2007; Forsythe and Shi 2003; Park et al. 2004). Therefore, according to Mitchell (1999), perceived risks are powerful at explaining consumers' behavior because "consumers are more often motivated to avoid mistakes than to maximize utility in purchasing". Based on this description, perceived risks can be defined as "the potential for loss in the pursuit of a desired outcome of using an e-service" (Featherman and Pavlou 2003). In relevant literature, there is a consensus that the perceived risk construct has been captured through the use of various scales (Featherman and Pavlou 2003), which describe the specific contents or types of perceived risks (Zhang et al. 2012). Basically, the nature of perceived risks is determined by the consumer's choice of a product, brand, retailer, or channel (Hong and Cha 2013). For reward-based CF, we argue that a backer has to deal with three different types of risks: *funding object risk*, *project initiator risk* and *intermediary risk*. Funding object risks can occur due to the novelty of a product as well as missing comparators and unbiased information. Project initiator risks can occur due to the lack of reputation. Intermediary risks may be related to the way of assessing new CF projects before starting the CF campaign online.

We analyzed literature on perceived risks in order to elaborate risk variables related to the three types of risks in CF. Combining research from different streams of traditional literature on purchasing behavior in e-commerce, we extend the traditional view on perceived risks, in which risk is a one-construct measure (Jarvenpaa et al. 2000; Pavlou and Gefen 2004) by three types of risks. Our research therefore proposes nine perceived risk variables: four associated with the funding object, three variables referring to the intermediary and two associated with the project initiator. These variables as well as our hypotheses and risk definitions are based on common literature on perceived risks, in particular Gefen (2002), Pavlou and Gefen (2004), Verhagen et al. (2006), Kuisma et al. (2007), Forsythe et al. (2006), Kim et al. (2008), Lopez-Nicolas and Molina-Castillo (2008), Crespo et al. (2009), Liu and Forsythe (2011), Zhang et al. (2012), and Hong and Cha (2013).

Research Model and Hypotheses

The goal of this research is to examine the effects of perceived risks with regard to the funding object, the project initiator and the intermediary on the funding on revocation behavior of backers. Various risk factors that make backers hinder to fund online a reward-based project are examined. In order to achieve our research objective, a *funding on revocation model for reward-based CF* (see figure 1) has been developed. Our model is premised on the Theory of Planned Behavior (TPB) (Ajzen 1991) that is originally based on the Theory of Reasoned Action (TRA) introduced by Fishbein and Ajzen (1975). TPB has been proven to be successful in forecasting and explaining human behavior across various application contexts (Davis et al. 1989; Wu and Chen 2005). We developed research hypotheses about backers' perceived risks with regard to funding on revocation in reward-based CF. In the following we will motivate our hypotheses, emphasize how they are related to CF, and specify how they differ to e-commerce theory.

The Internet is stripping away much information. Due to barriers in touching, feeling, and trying the examination of physical products via the Internet is limited (Forsythe and Shi 2003), and could lead to higher risk perception (Crespo et al. 2009; Liu and Forsythe 2011). Thus, the main risks are expressed towards buying a product, and have been shown to be negatively associated with the buying intention (Kim et al. 2008; Lopez-Nicolas and Molina-Castillo 2008). In reward-based CF, the main risks lie in the appropriate evaluation of the funding object. Usually this object is situated in an early stage of development, e.g. early prototype. Due to the absence of further sources of information, backers need to rely on information provided by the project initiator. In e-commerce, the quality and the range of features of products can be more easily assessed than in CF. Products in e-commerce in general are, for instance, pre-tested and valued by different interest groups. Based on this information, customers can evaluate the product. In sum, the perceived funding object risks seem to differ significantly from those in e-commerce. We define perceived funding object risk as *the likelihood that a funding object results in failure to function as expected*. Considering the negative impact of perceived funding object risk, we hypothesize:

H1a: The perceived funding object risk has a negative influence on the backers' funding on revocation behavior.

Social risk is concerned with consumers' perceptions of other individuals, e.g. family, acquaintances or peers, regarding their online shopping behavior (Chang and Tseng 2013; Lim 2003). Online buyers could be concerned about the reaction of other individuals who might think of the online buyer as being foolish

or showy (Hong and Cha 2013). It is possible that other society members do not accept the consumers' shopping behavior (Crespo et al. 2009). Social risks also refers to the potential loss of status in a buyer's social group due to the inappropriateness of the purchased product (Stone and Grønhaug 2006). When buyers' perceived benefits of online shopping are outweighed by perceived social risks, the purchase is likely to be avoided. As in CF, a lot of fancy, new and innovative products and services are being offered, it can be difficult for backers to estimate the reaction of their family and friends. As in many cases these products are offered exclusively to early bird backers, backers cannot wait to observe social reactions to a specific product. In this respect, CF differs from e-commerce, where products are usually available for a long term. Therefore, we assume that when social risks occur they can have a negative effect on the backers' funding on revocation behavior. We define perceived social risk as *the likelihood that a funding object results in the disapproval of family or friends*. We therefore hypothesize:

H1b: The perceived social risk associated with the product has a negative influence on the backers' funding on revocation behavior.

Psychological risk may occur due to the buyer's personal ego in making purchase decisions and the lack of experience in buying products online (Hong and Cha 2013). It describes that the buyer's choice of a product will have a negative effect on his peace of mind or self-perception (Mitchell 1992). The less experienced a buyer is in purchasing, the higher his mental discomfort from potentially making the wrong product choice (Hong and Cha 2013). Since many people do not have experience with CF, it is likely that psychological risks play an even more important role than in e-commerce. The fact that – due to the individuality of each project – it is a tough challenge to build up expertise in CF, adds to this. Experienced backers choose funding objects best aligned with own expectations. Thus, as backers perceive more psychological risk, they may experience greater level of anxieties and will be less willing to fund (Hong and Cha 2013). Therefore, we think, that backers will mostly experience psychological risks. We define perceived psychological risk as *the likelihood that a funding object results in inconsistency with self-image*. We therefore hypothesize:

H1c: The perceived psychological risk associated with the product has a negative influence on the backers' funding on revocation behavior.

Post-funding risks refers to all concerns related to after sales (Crespo et al. 2009). This risk variable embraces problems that occur while the consumer has troubles with the funded object, e.g. missing guarantees (Zhang et al. 2012). In reward-based CF this seems to be one of the main concerns. Due to the fact that project initiators often only run one project without manufacturing items on stock, backers might not be able to exchange a not working product for a new one. Further, in CF most project initiators do not have any experience and financial resources to handle post-funding services. Moreover, in some cases it is even questionable if a CF campaign can be put into practice as the project initiators have intended. Therefore, as backers perceive more post-funding risk, they may be less willing to fund online. We define perceived post-funding risk as *the likelihood of suffering a loss in post-funding associated with problems on the funding object, the service guarantee and commercial disputes*. We therefore hypothesize:

H1d: The perceived post-funding risk associated with the product has a negative influence on the backers' funding on revocation behavior.

Risks regarding the project initiator embrace the relational risks resulting from the trading partner (Verhagen et al. 2006). In online transactions sellers can behave opportunistically by taking advantage of the anonymity and impersonality (Pavlou 2003; Verhagen et al. 2006). Project initiator risks occurs when the backer believes that when engaging with the project initiator, he will suffer a loss (Pavlou and Gefen 2004). In the vast majority of cases, project initiators do not have a reputation and cannot easily establish a brand online. Further, most of the projects initiated are innovative and unique, thus no recommendations on the object itself exist. Backers therefore need to rely fully on the project initiators' offered information. In contrast to e-commerce, backers of a CF project are often not only interested in the object they purchase, but also in the idea, the concept and the project initiators. Therefore, the assessment of CF projects seems to be more of a subjective nature than in e-commerce. In CF, much information is being communicated through videos and photos. This creates an emotional connection between project initiators and backers (Bente et al. 2012) that can be misused by providing false information. We define perceived project initiator risk as *the likelihood of suffering a loss when engaging in a transaction with*

members of the population of project initiators at a particular CF platform. Considering the negative impact of perceived project initiator risks on the backers' behavior, we therefore hypothesize:

H2a: The perceived project initiator risk has a negative influence on the backers' funding on revocation behavior.

Delivery risks are inconsistencies between the ordered product and the delivered one (Hong and Cha 2013). In online transactions a consumer needs to wait before receiving the ordered products. In this period of time, the item can get lost or damaged. It is also possible that the delivery is delayed (Aghekyan-Simonian et al. 2012). In case of CF, the project initiator who perhaps has no experience in shipping products is handling the delivery. As people from all over the world can back CF projects, the project initiator needs to cope with potential shortcomings and legal requirements with respect to international shipping. If the project initiator fails to do so, problems with the funding object in the destination country might occur. In sum, a backer with a higher perception of delivery risk will most likely lose interest in backing a project. Taking into account the high efficacy and high transparency of delivery systems from many of today's online shops, it appears to be rather challenging for project initiators to meet the expectation of their backers in this respect. We define perceived delivery risk as *the likelihood that a funding object results in problems when delivering it to the backer*. We propose the following hypothesis:

H2b: The perceived delivery risk associated with the project initiator has a negative influence on the backers' funding on revocation behavior.

In online transactions, consumers not only rely on the perceptions of the seller but also on characteristics associated with the intermediary (Verhagen et al. 2006). Intermediary risks mostly refer to risks caused by the failure of an intermediary itself (Lopez-Nicolas and Molina-Castillo 2008). In case of CF, intermediary risks refer to the fundamental tasks by the CF platform provider, including the continuous monitoring of active funding projects and the protection of backers from fraudulent project initiators, from malfunctioning funding objects and from misleading factual statements about the funding object (Verhagen et al. 2006). Further, intermediaries could cause perceived intermediary risks by not taking enough care of the backers' personal data and by offering an immature platform, with respect to transaction security, for instance. We define perceived intermediary risk as *the likelihood of suffering a loss due to the inability of the CF intermediary to provide sufficient protection against fraudulent and/or opportunistic project initiators*. We therefore hypothesize:

H3a: The perceived intermediary risk has a negative influence on the backers' funding on revocation behavior.

Financial risk is defined as potential net losses of money (Derbaix 1983). It refers to the concerns towards the Internet's minimal security of (unauthorized) giving away, collecting and capturing data (Paul 1996). This mainly occurs due to deficiencies in the operating system of an online provider (Littler and Melanthiou 2006). These risks could lead the consumer into looking for alternative modes of shopping (Hong et al. 2013). This type of risk is widely recognized as the major obstacle to online purchases (Dai et al. 2014). Given the fact that many people do not have experience in CF, they might be even more careful with spending their money and leaving their personal data on a CF website than in an online shop. In e-commerce, it is pretty widely known which stores can be trusted and what the indicators for a trustworthy shop are. In CF, however, not much common knowledge exists in this respect. Many crowdfunding campaigns aim for support from backers from all over the world. Supporting a project on a foreign platform might raise uncertainties regarding the data protection standards and the availability of legal remedies in case of fraudulent behavior. Similarly to e-commerce, in CF intermediaries need to protect data with the best available resources featuring the highest security levels. We define perceived financial risk as *the likelihood that a funding object results in loss of money or other resources*. We hypothesize:

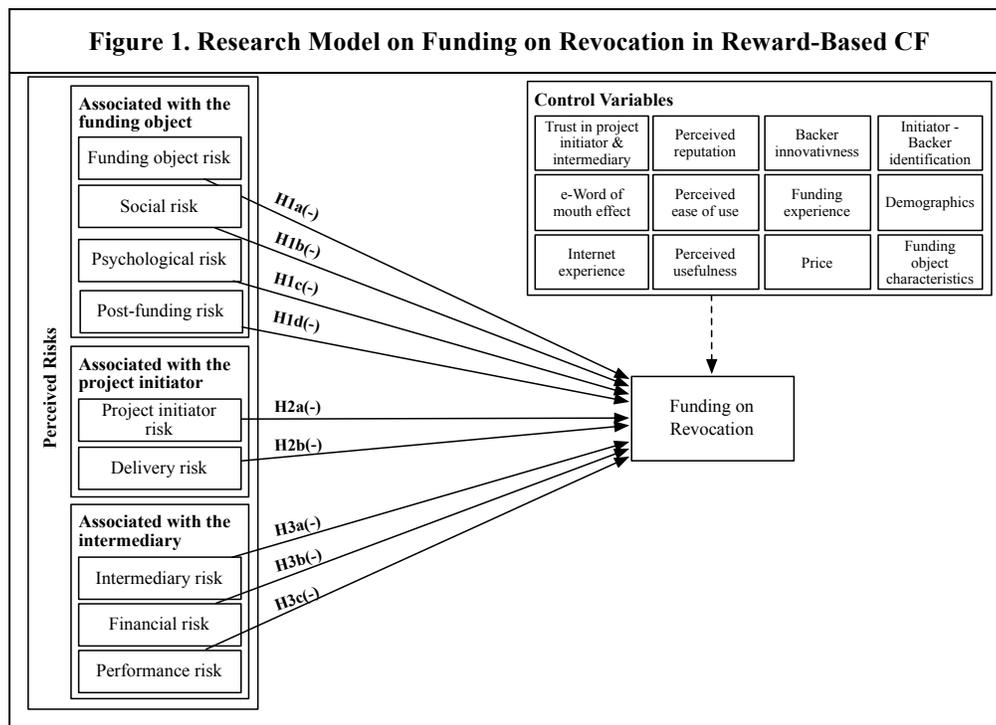
H3b: The perceived financial risk associated with the intermediary has a negative influence on the backers' funding on revocation behavior.

Performance risk describes the losses incurred when a website does not perform as expected (Aghekyan-Simonian et al. 2012; Forsythe et al. 2006). Poor performance can require users to devote additional time when using a website (Littler and Melanthiou 2006). Performance risks include deficiencies of a website's search function (Lee 2009), time required to get to know the website and its functionalities, cheap quality of displayed videos, pictures and textual content (Kuisma et al. 2007). Due to the negative impact of

performance risk on consumers behavior, website vendors introduced various mechanisms to lower consumers' perceptions of performance risks (Hong and Cha 2013). In the context of CF, the performance of the CF platform is particularly important. In many cases, this platform is the first and only medium for a project initiator to present his project and to communicate with backers. The CF platform needs to enable a wide range of project initiators, who have diverse needs with respect to website's functions, to present their projects to the crowd. At the same time, as many people do not have experience with CF, it needs to be intuitive and clear at each stage of the CF process. As reward-based CF is gaining more attention, many new projects are being started. In order to enable visitors to find the projects they are interested in, a sophisticated search function needs to be implemented. Further, in the case of limited quantity of funding objects at a low price, it is crucial that the funding process can be executed fast and flowing. In case of deficiencies or malfunctions, the backer will perceive performance risk and thus will probably not fund. As in many cases the monetary value of a reward a project initiator receives will be below the actual value of his contribution, backers in CF might have an even lower tolerance for poor performance than consumers using an online shop. We define perceived performance risk as *the likelihood that the funding process does not perform as expected* and propose the following hypotheses:

H3c: The perceived performance risk associated with the intermediary has a negative influence on the backers' funding on revocation behavior.

Our research model therefore broadly investigates the effects of e-commerce perceived risk on the funding on revocation behavior of backers. Perceived risks are exhibited in accordance to the funding object, the project initiator and the intermediary. The hypotheses referring to this research are illustrated in figure 1.



Proposed Methodology

We aim to explore perceived risks that negatively influences backers' funding on revocation behavior. Since perceived risk issues can best be expressed by backers' themselves, we will conduct a standardized questionnaire survey, including the perceived risk variables that we theoretically derived in the prior section. In line with Rogers (2003), we assume that the population of backers can be characterized as early adopters or even innovators, because they adopt innovations earlier than the general population.

To operationalize the variables, we draw on existing validated scales. In order to measure the dependent variable *funding on revocation*, we developed a scale according to the 5 item scale proposed by Zhang et al. (2012). Further, we have extended this scale by integrating 2 additional items: one directly related to

funding on revocation (possible answers: yes/no) and the other related to the amount of money pledged. So far, 45 items were formulated to measure the 9 perceived risk variables and the *funding on revocation* scale (table 1). All items are measured on a 5-point Likert scale, ranging from “strongly agree” to “strongly disagree”. Moreover, we integrated 12 control variables in our model (figure 1), which will be measured by 55 items derived from literature. These include: perceived usefulness and perceived ease of use (each including 4 items, adapted from Kamis et al. (2008)), trust in project initiator & intermediary (7 items) and Internet experience (7 items) (adapted from Verhagen et al. (2006); Kim et al. (2008)), perceived product value (4 items, adapted from Marimon et al. (2010)), backer innovativeness (7 items, adapted from Hyejeong et al. (2010)), initiator-backer identification (5 items, adapted from Homburg et al. (2009)), e-Word of mouth effect (3 items, adapted from Park et al. (2011)), funding experience (5 items, based on Jarvenpaa et al. (2000); Glover and Benbasat (2010)), seller and intermediary reputation (4 items, based on Jarvenpaa et al. (2000)), demographics (5 items), and project characteristics (classified according to type of funding project and nature of the good). The questionnaire is already structured and will be pre-tested and checked by experts aiming for a doctoral degree in order to ensure that the items were properly developed to meet the research objectives. We will measure the dependent and independent variables together within a questionnaire using self-reported as well as computer-recorded methods (Sharma et al. 2009). In case of doing so, research shows that the validity of the responses can be critical and should be viewed with caution (Podsakoff et al. 2003). In view of the fact that so far there is no established methodology for measuring the Common Method Variance (Chin et al. 2012; Liang et al. 2007), we will apply recommended suggestions provided by Podsakoff et al. (2003) to minimize the appearance of this error. Among others, these include assurance of anonymity through using pseudonymized codes and a random order of items. In order to receive computer-recorded data, we will ask backers to provide us with their exact backer ID (voluntary indication). Having this backer ID helps to automatically – using a web crawler – scan the backer list in order to gain information as to whether a backer has finally pledged or not. We will incentivize this by giving the possibility to enter a competition. With the start of the questionnaire, all participants will be asked whether they are currently involved in a running CF campaign. If not, then there is no need to answer the questionnaire. If yes, they are asked to provide the name of the CF project. The name of the project will help to formulate conclusions according to the CF project type. Further, the participants are encouraged to fill in the questionnaire in the last week of the funding period. We hereby assume that the backer has gathered enough information in the course of the campaign, e.g. from the comments section or other free accessible sources, to take a decision.

Table 1. Scales to Measure Research Variables			
<i>Name of variable</i>	<i>Number of items</i>	<i>Source of scale, adapted from</i>	<i>Risks associated with</i>
Product risk	4	Cunningham et al. (2005); Stone and Grønhaug (2006); Zhang et al. (2012)	<i>The product</i>
Social risk	3	Hong and Cha (2013)	
Psychological risk	3	Hong and Cha (2013)	
Post-funding risk	3	Zhang et al. (2012)	
Project initiator risk	4	Verhagen et al. (2006)	<i>The project initiator</i>
Delivery risk	4	Al Kailani and Kumar (2011)	
Intermediary risk	4	Verhagen et al. (2006)	<i>The intermediary</i>
Financial risk	8	Forsythe et al. (2006); Diallo (2012)	
Performance risk	5	Featherman and Pavlou (2003); Forsythe et al. (2006)	
Funding on revocation	7	Developed for this research; according to Zhang et al. (2012)	<i>Dependent variable</i>

Our source of data is based on the German market and the US-market. These markets are among the largest CF markets in the world (Massolution 2012). In order to reach a large number of backers, we will

focus on the leading reward-based CF platforms. We have chosen these platforms according to the CF platform database „Crowdfundingpr“ (Hoskins 2013) and further based on their funding volume raised in total since their foundation. Based on these criteria, a platform selection has been made. Our data selection will be executed on the platforms Kickstarter and Startnext. In order to get the above-mentioned questions answered by an appropriate number of backers, we have based our study on various types of sample selection. First, we will partner different reward-based CF projects on both platforms as a primary data source. Project initiators of running and already completed projects will be approached to distribute our questionnaire over their update site and their blog. Second, we will ask website operators, especially blogs related to CF, to distribute our questionnaire over their website. We have already applied our first approach and partnered 16 projects. As soon as the project initiators will start distributing our questionnaire, we will be able to reach over 12.000 backers at once.

In order to analyze the data collected and to test the research model, we will use the structural equation modeling (SEM), since it supports best analyzing the cause-effect relations between latent constructs (Hair et al. 2011). SEM is a statistical technique incorporating factor analysis (using a measurement model) and path analysis (using a structural model) (Hong et al. 2013). Compared to other statistical techniques, the advantages of SEM include more flexible assumptions and less measurement errors (Hong et al. 2013). Furthermore, applying partial least square structural equation modeling (PLS-SEM) will help to elaborate the key perceived risk variables negatively affecting the funding on revocation behavior in reward-based CF, even based on smaller sample sizes (Hair et al. 2011). Our model will be tested using SmartPLS 2.0 (Ringle et al. 2005) following the guidelines proposed by Hair et al. (2012).

Expected Contribution to Theory and Practice

This paper aims at developing a model that illustrates backers' risk behavior with regard to engagement in reward-based CF initiatives. Our proposed model comprises three types of risks subdivided into nine perceived risk variables. The results of this study will shed light on some important issues related to funding behavior in reward-based CF. To our knowledge there is no study that specifically considers these effects of risk on behavior in this domain. To study this area is important, since the success of CF projects strongly depends on backers' participation and willingness to fund. Doing so, our study will make important contributions to both research and practice. Moreover, this aspired approach will help to ensure the long-term efficiency and sustainability of CF in total (Burtch et al. 2013).

For academics, this research contributes to an application of risk theory into a new context of interest, reward-based CF, and will thus help to understand this context and provide actionable advices for practitioners (Hong et al. 2013; Weber 2003). Further, the main body of research has studied perceived risk variables as an entire single model to explain customers' buying behavior, which fails to reflect that a customers' behavior could also be affected by risks towards other influence factors. As already indicated, this study therefore divides the entire single model of risk into three types subdivided into nine perceived risk dimensions. Further, it is said that generalizing a theory to various settings can help to solve practical problems in firms (Hong et al. 2013; Lee and Baskerville 2003).

For practitioners, project initiators and intermediaries, it is crucial to know which risk dimensions are of greatest concern to consumers in order to adequately assess and reduce risks. This will help to systematically design and implement potential risk-reducing elements and strategies into the CF platforms and projects in order to attract the crowd to invest. Doing so, can further help to convert some visitors into backers and thus help to retain and expand the current base of backers. For instance, providers could offer an open or closed forum in order to enable backers to invite friends and family members to exchange information, opinions and advice about one or more CF campaigns.

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