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Crowdfunding: The Current State Of Research

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ABSTRACT

Crowdfunding represents an alternative way of funding compared to traditional borrowing. As a principle, crowdfunding is open to everyone - private persons as well as economic actors. A group of people, the crowd, financially contributes small amounts to projects, products or ideas. These projects, products or ideas are owned by fundraisers (e.g. entrepreneurs or private persons), seeking for money in order to get their project realized. Fundraisers search for investors directly or via a specific digital platform, referred to as intermediaries. Crowdfunding represents a recent web 2.0 based phenomenon gaining more and more scientific attention. Therefore, this article seeks to give an overview on the current state of scientific knowledge on the topic, summarizing core definitions as well as characteristics.

Keywords: Crowdfunding; Literature Review; Status Quo

INTRODUCTION

Crowdfunding, as the contribution of a financial amount to projects, products or business ideas by a number of investors (Wenzlaff *et al.*, 2012), has recently emerged as an alternative possibility for individuals to receive funding (Agrawal *et al.*, 2013; Kleeman *et al.*, 2008; Unterberg, 2010). The concept of mobilizing funding in small pieces is old and can be found in every incorporation (Fiedler and Horsch, 2014; Harrisson, 2013; Zademach and Baumeister, 2013). Contrary to typical financial investments, crowdfunding is fundamentally open to everyone (Blohm *et al.*, 2013; Wenzlaff *et al.*, 2012). Originally, the concept gained prominence with the financing of artists or creative projects and then spread across more sectors (Bradford, 2012; Meinshausen *et al.*, 2012). As statistics emphasize, crowdfunding is rapidly growing. US\$ 2.7 billion were contributed with over a million different crowdfunding incentives in 2012. By 2013, this amount increased over 51% to US\$ 5.1 billion (Massolution, 2013). Therefore, it represents a highly discussed topic on a global basis in younger media (e.g. Spiegel Online, 2014) but also scientific articles since 2010 (Moritz and Block, 2014).

Crowdfunding is a web 2.0 based phenomenon (Leimeister, 2012). Crucial factor for success of the concept is the digitalization of society with growing presence of the internet. The number of internet users increased up to almost 570 % between 2000 and 2012 (Internet World Stats, 2013). Today, markets are growingly saturated with digital equipments and accounts (Stalder, 2009). People are able to communicate, access and provide information constantly (Castells, 2009; Wolf *et al.*, 2012). As a recent development, people are willing to also contribute and give, fostering the rapid development of crowdfunding since about five years (Aaker and Akutsu, 2009).

This paper seeks to contribute to scientific research on crowdfunding, giving an overview on fundamental findings concerning crowdfunding. The content of this paper is based on a comprehensive literature review of scientific publications on crowdfunding from the period 2000 to 2014. A database search using the University of Leicester Online Library, Web of Science (Thomson Reuters), and EBSCO (EconLit, Business Source Premier, Academic Search Premier, Science Direct, Emerald Management Xtra, and the Web of Science (Social Sciences Citation Index)) resulted in usable texts. In August 2014, a search request on Web of Science (Thomson Reuters) with "crowdfunding" as well as "crowd funding" in title search, added up to usable of peer-group reviewed studies. The selection and identification of relevant publications was conducted with certain key words (including

crowdfunding, crowd funding and crowdfinancing) in their titles and/or abstracts. The systematic literature review was conducted following the approach by Tranfield *et al.* (2003), the studies were analyzed and classified due to their validity and their content as a contribution to the scientific discipline.

This article focuses on key aspects of scientific research on crowdfunding. It is structured as follows: Subsequent to the introduction, existing definitions will be presented. Additional focal areas of research like the economic basis of crowdfunding (two-sided-market), crowdfunding models, direct vs. indirect crowdfunding as well as the different actors involved in the crowdfunding process will be presented. An outlook on future research and a conclusion will finalize this work.

REVIEW

Definitions

Crowdfunding represents one dimension of the phenomenon of crowdsourcing besides crowdvoting and crowdcreation (e.g. Leimeister, 2012; Leimeister and Zogaj, 2013; Richter *et al.*, 2014). The term crowdsourcing is composed of "crowd" and "outsourcing", pointing to the meaning to outsource specific functions to a group of external persons (Kleeman *et al.*, 2008). The concept is based on the idea of "wisdom of a crowd" (Surowiecki, 2004). It represents an approach being in a juvenile state of scientific research (Howe, 2008). Jeff Howe (2006a; 2006b; 2008) was the first to define crowdsourcing in an online article in 2006. Up to today, his definition remains the most prominent scientific one, which we therefore follow (Brabham, 2009; Starbird, 2012).

The act of taking a job traditionally performed by a designated agent (usually an employee) and outsourcing it to an undefined, generally large of people in the form of an open call. (Howe, 2006b, p. 1)

Besides crowdsourcing (Howe, 2008), crowdfunding is closely connected to micro lending (Vitale, 2013). Micro lending refers to the the idea of funding of individuals, who do not have access to conventional financing from credit institutions (Armendariz and Morduch, 2010).

As for crowdsourcing, various definitions of crowdfunding exist of which none did receive overall scientific acceptance (e.g. Tomczak and Brem, 2013). Therefore, prominent existing definitions will be presented in the following table:

Table 1: Definitions Of Crowdfunding

Authors	Definition
Belleflamme et al., 2010, p. 5	<i>Crowdfunding involves an open call, essentially through the Internet, for the provision of financial resources either in form of donation or in exchange for some form of reward and/or voting rights.</i>
Fiedler and Horsch, 2014, p. 92	<i>Crowdfunding comprises forms of capital supply, with which capital seeking companies publicly present themselves on specific internet based platforms to a big group of potential capital providers based on their innovative business idea and offer this group the opportunity to engage themselves with the allocation of funding (translated from German).</i>
Hemer et al., 2011, p. 5	<i>Crowdfunding is a form of project and innovation funding with micropayments (translated from German).</i>
Lambert and Schwienbacher, 2010, p. 4	<i>An open call, essentially through the Internet, for the provision of financial resources either in form of donation or in exchange for some form of reward and/or voting rights in order to support initiatives for specific purposes.</i>
Tomczak and Brem, 2013, p. 338	<i>The act of taking a loan/funding traditionally performed by a designated agent and outsourcing it to an undefined, generally large group of people in the form of an open call.</i>
Voorbraak, 2011, p. 1	<i>The process of one party requesting and receiving money and other resources from many individuals for financing a project, in exchange for monetary or non-monetary return on investment.</i>
Wenzlaff et al., 2012, n.p.	<i>Crowdfunding is a type of fundraising for creative projects, but also for companies. Most important aspect is, that crowdfunding is open, uses the methods of web 2.0 for communication and has usually a type of material or immaterial rewarding (translated from German).</i>

Bottom line of all definitions from numerous authors is, that crowdfunding focuses on raising financial funding from the public, represented by a group of people, by using specific internet-based platforms (e.g. Mazzola and Distefano, 2010; Ribiere and Tuggle, 2010; Yang et al., 2008).

Crowdfunding As A Two-Sided Market

Crowdfunding is regarded as a typical two-sided market as it "ties together two distinct groups of users in a network" (Eisenmann et al., 2006, p. 2). Two-sided networks are characterized by a subsidy-side and a money-side. The subsidy-side is the group of investors contributing to the money-side, the fundraiser, while paying no fees to the platform (e.g. Osterwalder and Pigneur, 2010). Intermediaries charge different amounts to fundraisers while investors are not charged separate fees (e.g. Indiegogo, 2014; Kickstarter, 2014).

Crowdfunding Models

The dimensions of crowdfunding differentiate in terms of the allocation of resources and the reflux to investors (e.g. Moritz and Block, 2014; Zhang, 2013). In general, participants in the crowd can be rewarded in different ways: material (Vukovic et al., 2009) or immaterial via social acknowledgement (Kazai, 2011). Materially, the compensation can be monetarily as the project initiators agree to refund the paid amount directly or indirectly with products or services (Pelzer et al., 2012). Overall four models in terms of financing do exist (e.g. Beck, 2012; Giudici et al., 2012; Leimeister, 2012). Scholars divide crowdfunding into a donations, reward, lending and equity model.

The donations model refers to a classic fundraising objective with the difference that the donations are made via web 2.0 and, in most cases, a specific intermediary. Donators receive no material but immaterial, social rewarding in return for their contributions - e.g. public acknowledgements by the fundraisers (Leimeister and Zogaj, 2013). For the realization of creative projects, the donations model is commonly applied. It is also regarded as a rising opportunity for public institutions, such as libraries, to be financially funded by the crowd (McKinley, 2012). The only immaterial rewarding represents an option for investors to take part in "real-world problems" (Wiggins and Crowston, 2011, p. 1) with their engagement in the crowd.

The reward model includes both, material and immaterial rewarding. For crowdsponsoring investors are solely rewarded via acknowledgements (intersection to the donations model) as their name might appear in the

funded project (Belleflamme et al., 2013; Kortleben and Vollmar, 2012). In pre-selling or also pre-ordering, rewarding is materially based as investors receive the financed project or product before publication or market entrance (Hemer et al., 2011; Röthler and Wenzlaff, 2011).

Small loans are given in the lending model. Investors receive a fixed interest rate in this case. These kinds of contracts can either be made between private persons when a private investors finances a private fundraiser (Peer-to-Peer-Lending) (Hemer et al., 2011; Kaltenbeck, 2011; Kortleben and Vollmar, 2012), or from private persons to companies (Barasinka and Schäfer, 2010; Mach et al., 2013).

The equity model comprises a fundraising via selling shares of the fundraised company to the crowd. This is especially in the german-speaking area often described as crowdfunding (e.g. Leimeister and Zogaj, 2013; Hornuf and Klöhn, 2013) or "investment crowdfunding" (Barnett, 2013, p. 1), when start-ups and entrepreneurs receive money from the crowd and bridge early stage gaps in funding (Mollick, 2013). Investors receive a profit sharing as a material reward (Beck, 2012; Brem and Wassong, 2014). This model has received highest scientific attention in the past (e.g. Moritz and Block, 2014).

Direct vs. Indirect Crowdfunding

Crowdfunding can be divided into direct and indirect crowdfunding. Direct crowdfunding refers to a direct funding appeal from fundraisers to the crowd, e.g. on the website of the company. Indirect crowdfunding involves an intermediary in the crowdfunding process as the appeal is announced via a specific platform (Belleflamme et al., 2010; Burkett, 2011; Lambert and Schwenbacher, 2010). What makes direct crowdfunding less advantageous for unknown fundraisers (e.g. entrepreneurs) is the fact, that they would directly have to be able to address a large number of people via their own website. No required minimum number of participants in the crowd could be found in the current state of literature on the topic. However, Howe (2006a; 2006b; 2008) claimed a size of 5.000 participants in a crowd to be decisive for a successful crowdfunding campaign. This number seems to be calculated too high since famous crowdfunding platforms state an maximum average of 500 to 600 participants (Crowdcube, 2014; Kickstarter, 2014; Seedmatch, 2014). Still, most crowdfunding is conducted in reality indirectly via an intermediary which is emphasized by a growing number of crowdfunding platforms (e.g. Moritz and Block, 2014).

Actors Involved In Crowdfunding

Three different kinds of actors are involved in typical crowdfunding: intermediaries, fundraisers and investors (Tomczak and Brem, 2013).

Intermediaries

First, the intermediary, as the internet-based platform, takes an important role in connecting and matching fundraisers and investors (Zvilichovsky et al., 2013). Intermediaries ensure standardized crowdfunding processes for the investors and serve as a platform for communication, information and execution at the same time. Close communication between fundraiser and investor is important in order to receive a successful funding of the incentive (Brabham, 2009; Estellés-Arolas and González-Ladrón-de-Guevara, 2012; Howe, 2006b). Intermediaries follow different investment models (Barnett, 2013). All-or-nothing implies that the fundraiser only receives the amount if a previously defined threshold of investments is reached whereas fundraisers receive all investments in the keep-what-you-get model (e.g. Mahlstede, 2012; Moritz and Block, 2014). Intermediaries vary in their focus. Specific platforms for creative projects (indiegogo or RocketHub), organizational and corporate projects (Crowdfunder) or fundraising (Crowdrise, 2aid, Betterplace) (Grimme Institut, 2012; Wheat et al., 2013) do exist. Main fields of application of crowdfunding platforms are acquisition of contents, design & improvement, sales & marketing as well as research & development (Kaganer et al., 2013). In addition, platforms of social networking are of relevance since crowdfunding projects are communicated on them. Facebook or twitter serve can serve as a promoter of crowdfunding incentives (Belleflamme et al., 2011). The social support is of specific importance for fundraising (Wheat et al., 2013).

Fundraisers

Second, fundraisers comprise the individuals, seeking for funding. Crowdfunding provides them access to a market on one hand while raising money on the other hand (Burkett, 2011). As crowdfunding is fundamentally open, the typology of fundraisers can vary from companies (Burger-Helmchen and Penin, 2010), industries (Grier, 2011), institutions (Howe, 2006a) or non-profit organizations (Brabham, 2009). Currently, scientific research has focused primarily on companies as fundraisers (Moritz and Block, 2014). Requirements to be fulfilled by the fundraiser in order to initiate a crowdfunding project are minor (Estellés-Arolas and González-Ladrón-de-Guevara, 2012) as the self-marketing of the fundraisers idea is referred to as the most important requirement (Pelzer et al., 2012).

To start a crowdfunding project, fundraisers have to apply to the platform with detailed information on the project or to the company (e.g. Belleflamme et al., 2011). The platform then decides on publishing the project or declining it.

Scholars identified different motivations for participating in crowdfunding. The primary focus of fundraisers is to receive funding whereas raising awareness as well as feedback on the project, product or business idea is less important. Kleeman et al. (2008) state a growing importance of the feedback aspect as customers gain more and more influence on the value added process. Crowdfunding for start-ups offers entrepreneurs the possibility to bridge the early-stage-gap in which conservative funding is not possible (Hemer et al., 2011). Furthermore, access to the knowledge of the crowd is provided while duties towards investors remain minor (Surowiecki, 2004). At the same time, the base of potential customers is increased which, empirically confirmed, leads to higher sales. Market potential can be more efficiently exploited (Belleflamme et al., 2010).

The characteristics of the fundraisers influences the chance for a project to be successfully funded (Moritz and Block, 2014). Investors contribute to projects they want so see realized (Belleflamme et al., 2013). Therefore, non-profit organizations or socially focused companies are more likely to be supported by investors than others (Belleflamme et al., 2010). An additional success factor is the period of funding and the amount. Usually, crowdfunding incentives are limited to a certain period between 30 and 90 days (Mahlstedt, 2012). The proximity of a realization of the crowdfunding incentive depends on the time period of the incentive as well as the requested amount of funding. The longer the time period and the higher the requested amount, the lower will be the proximity of the crowdfunding incentive to receive full funding.

Investors

Third and last, investors represent the crowd, who "[...] decide to financially support these projects, bearing a risk and expecting a certain payoff" (Ordanini et al., 2011, p. 5). These investors are in terms of indirect crowdfunding registered users with access to the project information (e.g. Baba et al., 2014). In case of interest, investors contribute a fixed amount via a bank or micropayment provider. The crowd, as a group of recipients of the task, usually stays anonymous regarding crowd and the fundraiser(s) (Poetz and Schreier, 2009; Wexler, 2011). Investors are intelligent, qualified persons (Howe, 2008). A necessary qualification in order to take part in crowdfunding as an investor is not determined: users and consumers (Kleeman et al., 2008), amateurs (Schenk and Guittard, 2011) or individuals, seeking for commitment (Grier, 2011; Heer and Bostok, 2010) are regarded as members of the crowd. The crowdwork can either be tournament-based or collaboration-based (Leimeister, 2012). The primary focus on the crowd needs to be the collaborative funding of the incentive instead of aiming to individually work on a solution (Howe, 2006a). For crowdsourcing in general, these social effects are comprised by terms such as "crowd wisdom" (Brabham, 2009, p. 248; see also Leimeister, 2012, p. 388) or "collaborative knowledge" (Pelzer et al., 2012, p. 20).

Social reputation and intrinsic motives represent the main impetus for investors to participate in crowdfunding, extrinsic motives such as financial rewarding are less relevant (e.g. Lambert and Schwenbacher, 2010; Richter et al., 2014). Therefore, the identification with the incentive, project or company, represents a crucial factor (e.g. Eickhoff and De Vries, 2011). In most cases, investors are particularly motivated to fund when they regard the quality of the incentive as high (e.g. Mollick, 2013). Currently, the IT-developer Chris Roberts is seeking

for contributions for his new computer game "star citizen". As an appetizer, potential investors can log on a virtual platform to receive first insights in the computer game (Spiegel Online, 2014). Social networks influence the motivation of investors in addition (Lawton and Marom, 2010). When the number of investors in an incentive rises, other potential investors react with lower investments since they expect the incentive to be fully funded. As a result, the number of investor freezes or decreases and motivates the investors to finally contribute as they want to ensure the realization of the incentive (e.g. Smith et al., 2013).

CONCLUSIONS

The research field of crowdfunding is in a young state of scientific research. Quantitative studies are minor. Former studies focus on crowdfunding models as well as on the role of the actors in the process: intermediaries, fundraisers and investors. Previously, studies focused on companies as fundraisers (e.g. Brem and Wassong, 2014; Mollick, 2013; Tomczak and Brem, 2013). In terms of theoretical foundations, no consensus on definitions, dimensions or characteristics does exist. There is no detailed literature analysis, giving a generic overview on the state of research on crowdfunding. Three literature reviews could be identified. Bachmann et al. (2011) focus on peer-to-peer lending only while Feller et al. (2013) analyze crowdfunding quantitatively in terms of dimensions. Moritz and Block (2014) focus on literature on early-stage funding primarily.

As the numbers of intermediaries are rising rapidly, the crowdfunding movement is continuously developing (Mahlstede, 2012). As a result, scientific contributions are continuously challenged by new developments. Constantly new research is needed. Currently, crowdfunding is primarily regarded from a positive perspective as an alternative opportunity to receive funding. Limits and challenges of the approach received less scientific attention in the past and should be illuminated in the future.

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