

Increasing the Heterogeneity and Competition of Early Stage Financing: An Analysis of the Role of Crowdfunding in Entrepreneurial Ventures

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Abstract—The financial crisis has decreased the opportunities of small businesses to acquire financing through conventional financial actors, such as commercial banks. This credit constraint is partly the reason for the emergence of new alternatives of financing, in addition to the spreading opportunities for communication and secure financial transfer through Internet. One of the most interesting venues for finance is termed “crowdfunding”. As the term suggests crowdfunding is an appeal to prospective customers and investors to form a crowd that will finance projects that otherwise would find it hard to generate support through the most common financial actors. Crowdfunding is in this paper divided into different models; the threshold model, the microfinance model, the micro loan model and the equity model. All these models add to the financial possibilities of emerging entrepreneurs.

Keywords—Entrepreneurship; crowdfunding; equity finance; bank finance.

I. INTRODUCTION

FOR the better half of the past century the financing of entrepreneurial ventures has been a widely debated issue among academic scholars as well as policy-makers [1], [2]. In general it seems as though small, entrepreneurial ventures have perennial problems in acquiring necessary financial resources for growth. Since the beginning of the 20th century governments all over the world have tried different strategies in promoting the quality and quantity of supply of financing to small firms.

The 1980s and 1990s witnessed a surge in the availability of venture capital for start-ups, especially within the ICT-sector. After the dot-com crash in March of 2000, the amount of venture capital invested in start-ups and growing entrepreneurial firms has plummeted [3]. Recent estimates in Sweden indicate an 80-90% decrease in the amount of capital invested from professional venture capital firms in early stages over the past decade [4]. Whilst the formal venture capital market has downsized considerably, the informal venture capital, in the form of business angels seems to have experienced an upturn over the past decade [5]. From U.S. research there are indications that conglomerations of business

angels, so called business angel networks, have replaced the function of formal venture capital firms in some parts of the country.

As uplifting as the increased momentum of the informal venture capital market may be, we know from earlier research that entrepreneurial ventures are very dependent on overdrafts and credits from the banks [6], [7]. In most part of continental Europe, as well as other parts of the world, banks are the most important source of finance for small firms [8]. The current financial crisis has therefore been detrimental to the expansion of many small firms.

An alternative to the traditional sources of finance described above is crowdfunding. The idea behind crowdfunding is to raise relatively small amounts of capital from a large number of people, i.e. the crowd [9]. Given the problems that entrepreneurial ventures often experience in their search for external financing, it is the purpose of this paper to analyze the role that crowdfunding might have for these ventures. We will present the different types of crowdfunding options that are available on the market today and compare them with other, more traditional sources of finance. We analyze the reward structure for the investor found in crowdfunding in terms of motivation theory and point to a number of implications. We finish the paper with an outlook for the future of crowdfunding.

II. CROWDFUNDING – A BACKGROUND AND OVERVIEW

The definition of crowdfunding is financial initiatives using the Internet to create support for projects, with or without profit maximization [10], [11]. The term crowdfunding can partly be attributed to the emerging microfinance community and in some cases still is correlated to this type of funding. The roots can also be traced to equity financing and small loan financing. A common denominator appears to be that crowdfunding has been especially useful for financing unique projects, creative or artistic, that generally find lacking support from more traditional sources of finance. Even political projects has been crowdfunded, for instance a large proportion of Barack Obama’s election campaign in 2008, where a large proportion of funds, more than 50%, came from small financial contributions (less than 200 dollars). Crowdfunding in general seeks out the small, private investor that supports this particular idea, often out of altruism or from having a particular interest.

The most common form of crowdfunding is the threshold

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model, where the initiator in a specifically organized homepage (for instance Kickstarter) introduces the project. The investor gets the opportunity to select one of a number of financial thresholds. This may be that for 50 USD the investor gets a book and an exclusive t-shirt, while for 100 USD the investor gets the book, the t-shirt and an autographed dedication in the book. The actual transfer only takes place if the project reaches a certain threshold needed to produce a certain item (a book, a CD or a game for instance). After a certain time limit has been passed (a month or several months) the campaign is closed and payments are made.

One of the characteristics of crowdfunding is the reward system. A common distinction is that the investor obtains a social, financial or a material benefit, or a combination of the three [12]. The social benefit is the knowledge of helping to fund a particular project, in a given community with other enthusiasts. The financial benefit can be in the form of a rate of return or even equity. A material benefit is the access to an otherwise inaccessible commodity.

Over time there has developed a number of distinct types of crowdfunding alternatives, and the following types can be found today [13]:

1. Crowd donations, this is a model close to microfinancing where the reward often is limited to some token appreciation.
2. Crowd sponsoring, in crowd sponsoring the initiator and the investor agree on some kind of reward in the form of PR (which enhances the credibility and social standing of the investor)
3. Crowd pre-selling, in this case the compensation is the material award of buying a unique product before those not participating or even at the exclusion of those not participating.
4. Crowd lending, which essentially is an alternative to bank financing with a set model of interest paid. These initiatives often are separated from the more social forms of crowdfunding.
5. Crowd equity, in this case the donors are provided with a certain amount of shares in a profit-driven venture. This form of venture capitalism is one of the more complicated transactions in the crowdfunding area.

As can be seen above there are at least five distinct types of crowdfunding, and these types can be combined with a number of different business models. These include the threshold model, the microfinance model, the micro loan model, the equity model.

The threshold model has been a major success in supporting creative ideas. One of the largest sites, Kickstarter, has generated 350 million dollars since 2009 through the support of 2.5 million investors [14]. Over 30.000 projects have been financed in this way (through December 2012). 17 projects have been allocated more than 1 million dollars and at present the projects with most financing is a clock design with more than 10 million dollars allocated and a game platform with an allocation of 8.6 million dollars. There are a substantial amount of projects that has been over-financed, that is, passed the threshold and continues running. All money generated will be used and the supporters are allocated "stretch bonuses" as

TABLE I
DIFFERENT TYPES OF CROWDFUNDING MODELS

Model type	Raison d'Etre	Substitutes	Compensation
Threshold	Support creative ideas	Direct financing	Material, social
Microfinance	Poverty alleviation	Donations	Social
Microloan	Alternative to banks	Bank loans	Financial, social
Equity	Emerging enterprises	Business angels	Financial, social

finance is being generated above the threshold, in the form of more bonuses. Many Kickstarter investors are enthusiasts supporting a specific hobby or specific creative ideas. Today, Kickstarter charges a fee of 5 % for the services they provide.

One of the major microfinance crowdfunders is Kiva that supports numerous small microfinance loans throughout the developing world. In essence, a needing project in the developing world, however small, can get financing through lenders/donors in the developed world. This is in essence a microloan initiative especially for substituting aid through established NGO organizations, and avoids some of the large overhead costs of donating through these organizations. The loans are supposed to be repaid and the repayment ratio is argued by Kiva to be over 98%, which would be a good target even for small business start-up lending in OECD. Kiva has contributed to 380 million dollars in loans for 850 000 borrowers [15].

The micro loan model has been used by a number of sites, many of which have surfaced as consumers have been critical to the way that the banks operate after the financial crisis and their lack of support for the business community. For instance, in Sweden almost 10 billion Euros has been reallocated from small business loans towards the private house mortgage market, showing that commercial banks in the eyes of many observers lack a social understanding of the plight of small businesses. At the same time, these alternative lenders have a relatively small proportion of the market: while the British Funding Circle has lent 64 million pound to over 1 000 enterprises [16], Aldermore, a private lender that started at the approximate same time, have lent 850 million pounds to small businesses, in comparison, British banks total lending to small businesses is 107 billion pound [17]. The P2P-model (peer-to-peer financing) is close to crowdfunding but has not got the overall support for creativity or reducing poverty that is the case in microfinance and threshold financing [18], [19].

Equity crowdfunding is an even smaller, but growing, phenomenon where the British Crowdcube has generated capital from 26 000 investors for approximately 4.2 million pounds [20]. There are similar initiatives in many countries, such as FundedByMe equity in Sweden. These initiatives purport to be business angel initiatives.

III. HOW CROWDFUNDING HANDLES DIFFERENT INVESTMENT STAGES

In research on venture capital and business angels, there is often reference to the investment process, modeled somewhat

differently [21], [22], [23]. Drawing on three slightly different conceptualizations of the process, it starts with the origination of potential investments in the form of projects or startups. The origination stage is followed by screening and due diligence, where the potential investment is carefully examined. If it passes this stage, the investor and the investee engage in contracting. As the contract is finalized, the investee receives the funding. The stage following on contracting is often called managing, or monitoring. The final step in the process is harvesting, when the investor makes an exit from the investment.

Using this process model to understand crowdfunding, it is clear that crowdfunding provides a very smart mechanism for handling several of the stages in the process, but is less suited to deal with some of the others.

First, deal origination is handled in that projects in need of funding contact the crowdfunding actor. While deal origination is an important issue for financiers in order to attract potential investment objects, of at least equal importance is the issue of how to separate the good from the bad.

Screening and due diligence is a critical stage, where many potential investment objects are turned down because of lack of potential. Crowdfunding does not provide a way for handling screening and due diligence, something that is reflected in one of the major research topics for crowdfunding: the lack of regulations. There are always some doubts as to the validity of projects and how well the different hosts are able to curb fraudulent behavior, especially on part of the initiators. There is undoubtedly a temptation on the part of hosts to allow less thorough initiations to be made, and this is further exacerbated as the hosts typically lacks the means to control the initiators and their plans. One of the main offsets of this is the relatively prevalent but still uneven control coming from social media that typically tend to follow these types of creative ideas. An initiative taken to improve the situation is the attempt to create a framework for controlling crowdfunding launched by organizations supported by the EU and different business angel organizations [24]. In this attempt to create a framework, the emphasis lies on promoting regulation, education and research in the area. In addition, there needs to be a strong emphasis on transparency.

Next, contracting between investor and investee is handled neatly as well, since financiers are offered a contract for funding and reward, without any need for negotiation.

The next stage, managing, is the most important stage where investors add value to their firms through knowledge and networks [25]. This stage is not at all present in crowdfunding. Thus it seems that once the investee has received the funding, there is no more interaction between investor and investee. This seems natural since the large number of investors makes personal interaction time consuming.

Finally, the financier's exit is clearly stated in the contract, and it seems, well defined and limited in scope. The contract stipulates that the financier should receive a product or a sum of money at a certain point in time. However, since the reward

is such an important part of the crowdfunding logic, some attention should be devoted to the effect of different kinds of rewards on investors' satisfaction.

There is some limited research on crowdfunding, both regarding the hosts and the initiators, but very little research on the investors. The SellaBand platform that supports initiatives in music has been studied [26]. It turns out that the geographical distance between the initiator and the investors are somewhat correlated, especially as the closer the investor is, the less dependent the investor is on information generated solely by social media and Internet. The notion that different investors look at the success of similar projects before signing on to projects has been supported [27]. The likelihood that the initiator will be unable to perform the project due to lack of financing is important for the success of the model [28], as investors will not provide funding if they believe that the project can succeed without their money.

Another aspect of investor research is the risk of crowding out. Crowding out roughly predicts that people can experience an inherent satisfaction from activities (intrinsic motivation), but that such an intrinsic motivation can be harmed by providing external, primarily financial, rewards [29]. By emphasizing certain aspects of crowd funding, firms may be able to increase intrinsic motivation and decrease extrinsic aspects; by focusing on the inherent satisfaction from being part of a common effort to achieve something.

The non-financial gains to crowdfunding financiers are beneficial in that they do not bring the adverse effects of crowding out but still carry a strong signaling and symbolic value [30]. To illustrate, one may imagine the motivations of two different kinds of investors. The first is from the threshold model, driven by a similar drive to achieve as the entrepreneur. In those cases, offering too much monetary incentives can produce crowding out effects. These would be primarily motivated by the intrinsic motivation of producing the product, the value in exchange [31] of receiving it for collection or use, and the social capital from being recognized by everyone else as one of the select few able to do so.

The other kind of investor is from the equity model. These are not motivated by "owning gadgets", but by owning equity – however small – in exciting companies. Because of the minimal scale involved in crowdfunding, it is not so much the financial gains really, but a sense of importance. The intrinsic motivation for this kind of investor is derived from the contribution to various projects, while the social capital is gained from being recognized as an investor. Therefore, strengthening visibility among the owners would seem important. The value for the financier lies primarily in being recognized by peers (the other financiers) as a financier. Thus the value lays in the relation with the firm and by extension the other owners, in a value in use [32]. The social capital does not necessarily arise from owning the finished product, but from the sense of belonging to the owners' club. Because of potential geographical distances (global pool of investors) and the sheer number of investors, maintaining a relational approach towards the investors may be difficult to implement. In spite of this, strengthening this social capital could be

achieved through providing restricted – members only – interaction; online (forums, webpage, newsletter) as well as real-life meetings and gatherings.

IV. HOW CROWDFUNDING COMPLEMENTS EXISTING FINANCIERS

The extent to which crowdfunding complements other financiers on the market, depend on whether the processes of funding is different. In essence, the four major versions of crowdfunding (threshold model, microfinance model, loan model and equity model) to an extent supplements banks, microfinancing NGOs and business angels.

Kiva supplements the microfinance model that has been established for a number of years in developing countries. These NGO microfinance models typically provide small loans with a short duration, frequent repayment and also with personal collateral as a major part of the structure. Kiva manages to alleviate some of the problems with that model, specifically that lenders now are in direct contact with borrowers, having greater control in what projects they want to support and with a faster feedback of results. The traditional NGO microfinancier may even be eliminated as a worthwhile intermediary. The drawback with the Kiva model is the reduction in local knowledge, which can partly be helped by frequent social media contacts.

The threshold model is in essence a form of trade credit (or project loan financing). By promising a specific product the producer is able to get a pledge that can be used to raise even more money. This can be a powerful tool in the hands of producers and definitely provides added opportunities to advance new projects in terms of finance. This is a product that cannot readily be replaced by loans or trade credits in a traditional sense. Thus, the threshold model can be seen as an original process.

The loan model is in fact not very different from the bank loan model that exists on the market. In this case it can be argued that the differences between the crowdfunding model and the existing alternative loan models are relatively small. There have also been prior attempts to start lending based on a social agenda, leading to some limited success.

The equity model is actually more akin to investing in share in small stock exchanges rather than business angel financing. Since the investors generally have far less knowledge and influence in the portfolio companies they are dependent on other mechanisms for assuring control over the portfolio firm. This is therefore a model that is very dependent on the actions of intermediaries. This is also the area in which it is hardest to obtain unbiased information.

V. THE PROMISES OF CROWDFUNDING

The importance of crowdfunding can be seen in two ways. In comparison with small business financing crowdfunding has a marginal importance. But it is on the other hand one of few initiatives available for supporting creative projects, and also is a rather unique in terms of microfinancing where it is now possible to see directly what project is being financed.

Crowdfunding is an extraordinary way for firms to try new ideas without committing financial resources. Some firms use Kickstarter explicitly to test ideas that are somewhat outside their usual business and thereby are perceived as having a higher risk, and also in need of a new set of customers. Crowdfunding is a way of incorporating financial needs and risk management to investor demand, but will probably need a certain amount of altruism and social entrepreneurship associated to it. There is reason to believe that this is a valid idea, in particular for doing what Internet is a great instrument for, connecting people with common interests on a worldwide basis.

From a macro perspective, crowdfunding could be perceived as a screening mechanism in itself, for bigger investors. Once the project has received crowdfunding, it can be evaluated and those who seem to succeed can be approached by traditional investors such as business angels and VC funds.

Among the proponents and crowdfunding enthusiasts some important differences in relation to traditional sources of financing has been put forward. Among the more interesting ones has to do with geography. Most sources of finance, such as investments from business angels or credit from a bank branch office, are dependent of face-to-face meetings and interaction. With the advent of crowdfunding the constraints of being an entrepreneur in rural or lagging areas without access to a physical infrastructure becomes less problematic. Furthermore, the dependence on one investment manager, investor or credit loan officer is reduced. Instead the decision to grant credit, donate money, or invest in equity is divided between thousands of potential creditors or investors. In a way this is a true democratization of the financial system that we have not seen before. Together with the expansion of social media in different forms, such as Facebook, this could potentially lead to a major change in the operation of financing for entrepreneurial ventures. At the very least, entrepreneurial ventures in some industries have more options available today than they had in the past. The challenge has to do with the scaling up of the industry.

Finally, the traditional roles of financiers and customers become blurred when the same people are financing the start-up and at the same time are its customers. In a way this is also the case in companies within the paradigm of Open Innovation [33]. In future research, the impact of this multiplicity of roles on the dynamics over time of both goal convergence/divergence as well as of the motivations for investing could be studied

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