

# Equity Crowdfunding: Investigating the Role of Entrepreneurial Quality in Affecting the Success of the Campaigns.

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**Objectives.** *The 'equity-crowdfunding phenomenon' has rapidly become popular in recent years and is receiving the attention of global institutions. Equity Crowdfunding (ECF hereafter) is considered a financial innovation (Nasrabadi, 2015) that can boost companies (especially the innovative ones) and encourage investments, particularly in the post-crisis period (De Buysere et al., 2012) with the resulting contraction in credit supply (Yamen and Golfeder, 2015), the so-called credit crunch<sup>1</sup>. ECF, in fact, has begun to be seen as a concrete source of funding in response to the scarcity of funds faced by small and medium-sized enterprises (SMEs), and to the increasing difficulties faced by start-ups in obtaining financial resources from banks, venture capitalists and angel investors.*

*Despite the growth and spread of ECF, not all campaigns are successful and many ventures do not get financing due to non-achievement of the funding goal. Thus, the issue of success in ECF campaigns is of considerable interest.*

*An important reason why many campaigns tend to fail is the strong presence of information asymmetries between founders and crowdfunders. These asymmetries act as barriers that can lead to the risk of adverse selection and potential market failure (Akerlof, 1970). In ECF, investors are characterized by limited experience and capability in evaluating investment opportunities (Ahlers et al., 2015), and the cost to perform due diligence can be high (Agrawal et al., 2011). This could induce crowdfunders to make decisions based on non-objective parameters or follow the orientation of the crowd. In both cases, the risk of financing a potentially bad project (a 'lemon') is high. The well-known 'lemons problem' (Akerlof, 1970) refers to issues that arise due to asymmetric information held by the investor and founder which refers to the value of the company. In this scenario, the separation between high quality and low quality projects is difficult to recognize. A relevant issue is moral hazard due to possible opportunistic actions by entrepreneurs. They have more knowledge of the quality underlying the initiative and have information about the venture that they might not reveal to investors.*

*ECF platforms are virtual spaces in the exchange process, characterized by the absence of personal interactions. The limited interaction between the parties and the absence of signals deriving from the quality or reputation of the intermediary (e.g. banks) contribute to the increased risk for investors. In this context characterized by uncertainty, the signals that founders present to crowdfunders to induce them to invest could play a key role. Observable signals, as suggested by signalling theory (Spence, 1973), can mitigate the problem of information asymmetries, to the extent that they can show the quality and value of the venture. Credible information, in fact, can help investors better understand of the company, thus increasing their ability to decode signals. This is particularly true in the case of start ups characterized by uncertainty on the future development and little track record. At the same time, reliable information can help entrepreneurs get better results from the crowdfunding campaigns.*

*However, as Ahlers et al. (2015: 960) reported 'not all the information on the quality of a venture will ultimately be an effective signal to help overcome the problem of information asymmetry'. Regarding this issue, a few scholars have started to investigate some types of signals in the ECF. In the current literature, in fact, there are some studies on the determinants of success in ECF campaigns which leverage the theory of signals. Ahlers et al. (2015) examine the impact of venture quality (human, social and intellectual capital) and uncertainty (based on Baum and Silverman's study, 2004). Vismara (2016) investigates the role of equity retention and social networks. Vulkan et al. (2016) use the results of Mollick's work on reward crowdfunding (e.g. average amount pledge and campaign goal) as a benchmark for ECF. Ralcheva & Roosenboom (2016) analyse the role of certifying signals (e.g. awards, professional investors, professional advisors). Lukkarinen et al. (2016) explore, in the ECF context, factors related to the investment criteria*

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<sup>1</sup> Credit crunch is generally defined as a contraction in credit supply caused by reductions in bank liquidity or by greater risk aversion of banks in granting loans. This status is an economic condition in which investment capital is difficult to obtain and interest rates are high.

traditionally used by venture capital and angel investors (markets, stage, team, concept, scalability and terms).

While the number of contributions focussing on signals in ECF is growing, there is a scarcity of empirical studies that investigate entrepreneurial aspects of the companies as signals in the context of ECF. Our study aims at contributing to fill this gap, namely the shortage of studies that address the issue of information asymmetries in ECF through signals derived from the entrepreneurial skills of the company.

In this scenario, we decided to concentrate our attention on the entrepreneurial characteristics of the company as potential signals that could explain the success of ECF campaigns. We analyse the entrepreneurial attributes of the company on two levels: the individual level (entrepreneur) and the firm level (venture). We assume that these aspects, which form the so-called 'entrepreneurial quality' of the company, may affect the decision of crowdfunders to finance a project and the achievement of the target amount of capital. In doing this, we provide a conceptual framework that describes and delineates the notion of entrepreneurial quality (EQ) of the company. Put simply, the main goal of this working paper is to investigate the role of EQ in the success of ECF campaigns. Our assumption is that EQ can play a signalling role for crowdfunders in an ECF context. Within the framework of the information asymmetries and signalling theory, our work aims to analyse the impact of EQ on the success rate of projects.

EQ is a concept already used by some authors in studies on company performance or regional development (Guzman *and* Santos, 2001; Santos-Cumplido *and* Linan, 2007; Fernandez-Serrano *and* Romero, 2013; Goslin *and* Barge, 1986; Kuznetsov *et al.*, 2000). Fernandez-Serrano *and* Romero (2013) included the notion of the EQ of SMEs by the personal characteristics of the entrepreneurs (motivation and previous experience) and different dimensions of the so-called 'entrepreneurial orientation' (innovation, proactivity and co-operation, without using risk taking). Guzman *and* Santos (2001) show the importance of entrepreneurship for business success and economic development. Their study refers to the initiatives and behaviours of entrepreneurs to energize their businesses (innovation, ambition, proactivity and co-operation), which depend on their own personal qualities or the work environments they create (e.g. professional experience, education and motivation). Also, the work of Santos-Cumplido *and* Linan (2007) analyses energizer behaviours (innovation, ambition, cooperation and proactiveness), personal characteristics (motivation) and work environment (e.g. work experience and skills). In the three works, the authors provide a definition of the entrepreneurial quality of the company. A common denominator of these studies based on the EQ is the concept of entrepreneurial orientation (EO).

Starting from the pre-existing literature, we provide a framework which includes several factors that make up EQ. Our notion of EQ considers the concept of entrepreneurship both at individual (1) and firm level (2). We consider:

(1) At the individual level, the characteristics of the founders as expressed in terms of previous work experience, which includes prior industry experience and prior start-up experience (Marino *and* De Noble, 1997; Ray, 1993; Omri *and* Boujelbene, 2015).

(2) At the firm level, the well-known concept of 'entrepreneurial orientation' (Miller, 1983; Lumpkin *and* Dess, 1996; Covin *and* Slevin, 1991; Stevenson *and* Jarillo, 1990). This concept includes three main aspects:

- risk taking;
- innovativeness;
- proactiveness.

These three factors capture the methods and organizational processes used to implement the company's founding strategy (Lumpkin *and* Dess, 1996; Miller, 1983).

**Methodology.** To investigate the impact of EQ on the success of ECF campaigns, we used a quantitative methodology based on two econometric models. Our empirical analyses are currently in progress.

We hand-collected a dataset of 108 campaigns launched on seven Italian portals. These portals cover a variety of projects on the platforms since their origin (period January 2014 - February 2018).

In line with previous studies (Ahlers *et al.*, 2015; Vismara, 2016; Ralcheva *and* Roosenboom, 2016; Lukkarinen *et al.*, 2016), we considered two measures as proxies for success: investors and the percentage of target capital collected. Our first variable, namely the number of funders, includes the number of investors at the end of a campaign (Ahlers *et al.*, 2015; Vismara, 2016; Ralcheva *and* Roosenboom, 2016; Lukkarinen *et al.*, 2016). The second variable, namely funding collected, includes the percentage of the target amount raised (Vismara, 2016; Ralcheva *and* Roosenboom, 2016). These two proxies represent the dependent variables of our two econometric models.

We used a negative binomial regression for the first model (dependent variable: investors) and an OLS (ordinary least squares) regression in the second model (dependent variable: funding). In both cases we used robust standard errors. Furthermore, in the models, control variables are used and a VIF (variance inflation factor) analysis is performed (to exclude multicollinearity).

The independent variables, which form the entrepreneurial quality, are divided into two levels (Table 1). In our study we tested each explanatory independent variable for the hypothesis of a positive effect on the success of ECF campaigns.

Tab. 1: Entrepreneurial Quality Construct

## Selected References

*Independent variables*

Entrepreneurial Quality (EQ)	Guzman & Santos (2001); Santos-Cumplido & Linan (2007); Fernandez - Serrano & Romero (2013); Goslin & Barge (1986); Kuznetsov et al. (2000)
Entrepreneurial Quality in ECF	Marino & De Noble (1997); Ray (1993); Omri & Boujelbene (2015)
Individual Level: prior work experience (Prior Industry Experience; Prior Start-Up Experience)	Miller (1983); Covin & Slevin (1991); Stevenson & Jarillo (1990); Lumpkin & Dess (1996)
Firm Level: Entrepreneurial Orientation (Innovativeness; Proactiveness; Risk taking propensity)	

*Dependent variables*

No. Crowdfunders	Ahlers et al. (2015); Vismara (2016); Ralcheva & Roosenboom (2016); Lukkarinen et al. (2016)
Funding collected (in %)	Vismara (2016); Ralcheva & Roosenboom (2016)

Source: elaboration by the authors.

**Findings.** *This study is a work in progress that aims to investigate if EQ is a success driver in the equity crowdfunding model. This paper attempts to contribute to the current debate on signals and attributes of initiatives in ECF, and to fill the knowledge gap between founders and crowdfunders, due to the online virtual ecosystem of the platforms.*

*The analyses that will be conducted aim to examine the impact of entrepreneurial quality signals in funding success. The results of our two econometric models intend to assess whether EQ is a success driver in the equity crowdfunding model. Hopefully, a positive effect will emerge.*

*The results should be able to demonstrate which factors are more likely to impact on the percentage of funding collected or the number of crowdfunders involved. We expect that many signals, both at the individual level (prior work experience) and the firm level (entrepreneurial orientation), help to increase the success rate of ECF campaigns, thus mitigating information asymmetries.*

**Research limits.** *The first limit of this study is the use of data from only one country, Italy. The Italian economy is a typical western economy (being part of the EU and the EEA), so presumably our results could be relevant and applicable in other western economies that have similar regulatory environments. Therefore, the results may be generalized, with caution. A similar potential limitation in this study is the use of specific and typical parameters that characterize start ups or SMEs in Italy (e.g. I.P. and R&D) when measuring entrepreneurial orientation. It must be taken into account that the ECF mechanism is subject to regulation in every nation (different from each other), as there is no universal regulation. The insights of our work could be extended to other countries and continents, but to broaden the understanding of the phenomenon at a global level, the specific cultural differences of the countries must be considered.*

*The second limit is that our paper focuses on several aspects of entrepreneurship, but we do not include other possible factors, such as market conditions and the capabilities of the start ups and SMEs. Considering the entrepreneurial orientation construct, we use some parameters already used in entrepreneurship literature and contextualize them to the field of equity crowdfunding. However, we do not exclude that there may be other parameters that can be used for the same purpose.*

*Finally, another limitation of our study is that the success of crowdfunding initiatives is also determined by non-measurable factors that can influence both the crowdfunders decision to invest and the amount invested. Both personal motivations and the 'lottery effect' might be included in this type of factor.*

**Practical implications.** *Hopefully this study will have useful implications for different actors: founders, online portal managers and policy makers.*

*This paper should be able to highlight information in the entrepreneurial sphere perceived as quality signals by crowdfunders, providing valid information especially for platform managers and entrepreneurs in launching ECF campaigns. Moreover, this work can provide support especially to policy makers, who promote types of funding to support start-ups, SMEs and entrepreneurs, and make decisions on fund-raising tools. They could encourage the use of specific information, stimulate actions by the main actors of the ecosystem and implement new development strategies for ECF.*

*The online ECF market presents a challenging environment for crowdfunders to evaluate start up value. In this*

virtual context, one of the most important challenges facing founders is to communicate information about the start up. The results of this work may have different implications for crowdfunders, who propose initiatives, and for platform managers, who publish projects on their online portal. Both types of actors should acknowledge the importance of signals and should implement actions to improve the quality of the campaigns:

- platform managers should reserve sections of the campaign window for providing details (e.g. prior work experiences), and improve current project spaces with more specific sections;
- founders should introduce specific details about the company and the team (e.g. by implementing links) in a clear and detailed way (team members often insert extremely small descriptions or do not present any information in some areas).

Observable signals could reduce the uncertainty associated with the initiative, limiting the information asymmetry problem, and could represent elements of reflection by the managers of the platforms and regulators. Thus, our work could provide useful information to managers to better guide their actions to improve the environment for users and help policy makers who encourage new initiatives, the use of the financing mechanism through the crowd and determine strategies for this fundraising system.

**Originality of the study.** This paper could offer contributions to the current crowdfunding literature, in particular to the nascent research stream investigating information mechanisms to achieve success in campaigns.

Firstly, the paper proposes an original framework for studying success signals in ECF projects and a potential starting point for future research linking entrepreneurship and crowdfunding. The debate over success factors in the crowdfunding research stream has so far focused mainly on the reward model, and there are few contributions on ECF. Papers on the equity-model that draw on signalling theory provide insights on the role of personal social networks (Vismara, 2016), educational background of the team (Lukkarinen et al. 2016; Ahlers et al., 2015), certifications (Ralcheva & Roosenboom, 2016) and equity offered (Ahlers et al., 2015; Vismara, 2016; Ralcheva and Roosenboom, 2016). Our work considers several factors of entrepreneurship as effective signals for crowdfunders. To the best of our knowledge there are no discussions of the EQ of the company (at individual or firm level) and its role in the success of ECF campaigns.

Secondly, in this study we chose to examine the Italian equity crowdfunding market, a not yet thoroughly investigated country, in particular for the ECF model. This choice is due to the interest and importance of this form of financing in Italy, the first country in Europe to have a specific and organic regulation of ECF (Decree Law n. 179/2012), creating a national registry for ECF operators. The case of Italy is often cited in various crowdfunding papers, being considered of international interest.

Finally, further steps in this work concern implementing the analyses with the data of the team and the company through their respective LinkedIn and Facebook accounts. In fact, social networks, as recalled by some authors (Colombo et al., 2014; Vismara, 2016; Mollick, 2014; Ahlers et al., 2015), are an important way to connect founders and potential investors.

**Key words:** Equity Crowdfunding; Signals; Entrepreneurial Quality; Crowdfunders; Start ups; Entrepreneurs

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