ACADEMIA International Journal for Social Sciences
Volume 4, Issue 4, 2025 ISSN-L (Online): 3006-6638

Impact of Quality Signals on Investors' Investment Decision in Equity Crowdfunding

Syed Muhammad Hamza Abid Wasti
hamza.abid@nsu.edu.pk
Assistant Professor, Department of Management Sciences, National Skills University Islamabad, Pakistan.

Muhammad Amin
muhammad.amin@nsu.edu.pk
Assistant Professor, National Skills University Islamabad, Pakistan.

Moazam Shahwar
moazam.shahwar@iub.edu.pk
Lecturer at Department of Public Administration, The Islamia University of Bahawalpur, Pakistan.

Javeed Iqbal
javeedkhan7878@gmail.com
Lecturer, Ghazi University Dera Ghazi Khan, Pakistan.
Corresponding Author: * Moazam Shahwar moazam.shahwar@iub.edu.pk

Received: 06-11-2025 **Revised:** 02-12-2025 **Accepted:** 13-12-2025 **Published:** 25-12-2025

ABSTRACT

Equity crowdfunding provides entrepreneurs and founders an opportunity to raise funds from large number of audience in which each investor provide small amount, instead of large amount from small group of professional investors. Early research focused on success drives of equity crowdfunding but this study explores the quality signals that affect the investors' investment decision and help entrepreneurs to achieve overfunded campaign success in equity crowdfunding. Based on signaling theory, we develop a research model to conduct an empirical study using quantitative data collected from UK based world largest equity crowdfunding platform, Crowdcube. Findings show that quality signals have positive significant effect on investors' investment decision. It means that investors' behavior is same while making investment decision in equity crowdfunding as in conventional investment settings. Investors read quality signals in equity crowdfunding as well and choose those crowdfunding campaigns that are with high magnitude of quality signals. These results confirm that investors always evaluate investment opportunities in terms of business potential by analyzing quality signals in conventional investment opportunities as well as in equity crowdfunding.

Keywords: *Equity crowdfunding, quality signals, investment decision, successful campaigns*

INTRODUCTION

Crowdfunding theory has been used to create ventures since last decade. Due to a relatively new field of study, existing literature lacks in empirical evidence to support crowdfunding theory. Crowdfunding theory has been practiced because new ventures usually are not able to find early stage financing to develop their knowledge and inventions into practical commercial application (Wasti et al., 2024; Wasti and Ahmed 2023; Lindstrom and Olofsson 2001; Widding et al., 2009). Crowdfunding helps entrepreneurs to transform their entrepreneurial competencies into entrepreneurial reward (Nespoli et al., 2022). Asymmetric information between potential investors and entrepreneurs, uncertainty of investment returns and lack of collateral are the causes of financial constraints that create funding gaps for new ventures and entrepreneurs (Lukkarinen and Schwienbacher, 2023; Bahlous-Boldi, 2022; Chod and Lyandres, 2021; Mochkabadi and Volkmann, 2020; Herv´e et al., 2019). New ventures face difficulties in finding access to external financing in their early stage of development due to the tendency of traditional investors (e.g. business angels, banks, venture capitalist) to invest in less risky and cost effective investments in established firms. In these circumstances, entrepreneurs usually finance their ventures by using own capital, by collecting the capital from family and also from friends to prove their concepts and to meet early start-up cost (Shapira and Dushnitsky, 2010).

Social network is a solution to early stage financing gaps with an assumption that online social networks make the new venture able to access a new source named as crowdsourcing (Cable and Shane, 2002; Wong and Zhang, 2008). Shiller (2013) suggests that to grow an economy successfully, the resources dispersed over millions of people may be activated and crowdsourcing is one of the means to do that. The concept of crowdsourcing has been implemented by number of developed countries by making laws and regulations. Crowdfunding works in the form of a Web base platform which allows entrepreneurs to pitch their ideas in the form of crowdfunding campaign with the information of team, equity offered, amount required for project, description of preparation, business plan, working address and team messages. Entrepreneurs invite the crowd of potential investor to invest in the business with small amount without any limitation on number of investors. Platform gives specific number of days to each crowdfunding campaign to reach its requested target. Entrepreneurs also use their social network and put their social media accounts with their ideas to attract their social media friends and followers for investment in their ideas.

In the management and entrepreneurship studies in recent era, crowdsourcing has got so much interest by the researchers for enhancing the literature. The rising interest of the researchers in the study of crowdfunding contribute across a range of themes including the process, platforms, dynamics of operation (Ordanini et al., 2011; Wieck et al., 2013; Molick 2014) and the regulations to operate the relations between financial receiver and crowd funders (Bradford, 2012; Stemler 2013; Lehner 2013). Crowdfunding, an innovative development, has been sought to provide an opportunity to new ventures to utilize a large dispersed audience, the crowd, to get contributions relatively small sums of money through an open call commonly by the use of internet (Sigar, 2012; Lehner, 2013; Belleflamme et al., 2014)(ul Islam, Khaliq et al. 2022). Crowdfunding has been used for various purposes especially for donations in past. In recent era, this concept has been used for business purposes to mobilize the crowd to participate in new ventures and community projects. It has been used to fund the projects for research (Cameron et al., 2013; Loucks, 2013) films, game and musical projects (Sorensen, 2012; Weigmann, 2013), and also for new venture start-up (Ibrahim et al., 2012; Lehner, 2013).

Crowdfunding, in recent years, has emerged as a valuable alternative source of financing for new ventures and entrepreneurs seeking for external funding (Guggenberger et al., 2023). It enables entrepreneurs to implement their ideas and innovations even though not having conventional financing resources such as banks and venture capital. Most recent studies in the context of crowdfunding are focusing on equity crowdfunding because of growing popularity of this type of crowdfunding (Lukkarinen et al., 2023). Lehner (2013) concludes that the number of crowdfunding platforms and initiatives are increasing rapidly causing scarcity of donation based crowdfunding. Practices show that most of the crowdfunding projects offer either financial reward (equity or profit sharing) or non-financial reward (finished products or services) making donation based model less common in practices. It is experienced that reward-based crowdfunding limits the interaction between investors and ventures. It is also further noted that entrepreneurs need investment from investors instead of reward in return or pre-sale when there is need of large capital. Under such circumstances, crowdfunders find profit sharing crowdfunding model more economical. Shiller (2013) concludes that new ventures can resolve their financial issues by an innovative method of securitization named as equity crowdfunding.

Larralde and Schewienbacher (2012) believe that equity crowdfunding will become inevitable. It is one of the current financial innovations to help the new ventures, entrepreneurs and simple projects to raise needed capital (Shiller, 2013). Equity crowdfunding allows all kind of investors, small or big, to become venture capitalists, there is need of high level regulation to control it (Molick, 2014). Due to increase in efficiency of fund raising process from the entrepreneurs' perspective, it is not surprising that equity crowdfunding has successfully gathered such momentum in recent years (Vulkan et al., 2016). Equity crowdfunding is different from traditional equity financing in number of ways. Instead of offering shares to investors through traditional financial intermediaries, equity crowdfunding offers ownership in the business directly to the crowd of potential investors through internet only by using an equity platform. Equity crowdfunding model is designed to create private limited companies with no limitation for maximum number of investors while in traditional equity financing, public offering can be done by public limited company and there is limitation of maximum fifty shareholders in case of private limited company (Malik, Shahwar et al. 2023). Equity crowdfunding is an opportunity for new ventures and entrepreneurs to attract investors from the crowd because of relatively small amounts are invested by large number of investors that makes it easy for investors to take risk of investment in new ventures. While in traditional equity financing, it is very much difficult for new ventures to attract the traditional fund providers i.e. banks, venture capitalist, angel investors and large scale equity offering. Social network of entrepreneurs is also an influencing factor in equity crowdfunding where social media is used to attract the crowd for investment (Saadia, Shahwar et al. 2023).

Recent researches show that equity crowdfunding, in near future, is likely to pose a great challenge to venture capitalists and business angel financiers (Ralcheva and Roosenboom, 2020; Vulkan et al., 2016). Although crowdfunding market is experiencing continuous rapid growth, still it is very challenging for a venture to achieve its funding target (Bao et al., 2022). However as equity crowdfunding is new phenomena, the understanding about the nature of equity crowdfunding and its contributions to entrepreneurial activities is still limited. Existing literature talks about success factors for a crowdfunding campaign. There is a significant role of information cascade in the success of crowdfunding campaign. Public profile of the investors plays an important role in increasing the appeal of the offer among early investors. Early investors in turn attract the late investors (Vismara, 2016). Researchers have over sighted the phenomenon of overfunded campaign success which is the result of investors' trust in a crowdfunding campaign in the process of equity crowdfunding. Previous literature provides the understanding about process and success of crowdfunding campaign, but does not provide a model of the formation of investors' attitude to invest in overfunded campaign (Iqbal, Shahwar et al. 2024). Researchers have not yet explored how the factors such as quality signals emerge from campaign characteristics and directors' information play role in developing investors' trust and result in overfunded campaign success in equity crowdfunding. There are some researches on fund raised in equity crowdfunding crowdfunding (Gabison, 2015; Molick, 2014, Frydrych et al., 2014) but underlying factors that influence investors' investment decision are not yet uncovered. Koch and Jascka (2015) identify funding goal, funding duration, reward level, reward limitation, textual information, media communication, activeness of founder on platform, number of friends, number of campaigns and project category have influence on fund raised in reward-based crowdfunding. Similarly target, equity, idea description, provision of documents, impotence of documents, number of investors, largest investment, updates, directors' information and social media communication etc. are the factors may be responsible for investors' investment decision need to be studied in the context of equity crowdfunding (Shahwar, Amin et al. 2024).

In equity crowdfunding, entrepreneurs usually target small investors who do not have the ability to research and evaluate potential investment. In order to raise money successfully through equity crowdfunding platform, entrepreneurs and firms find the ways to clearly signal the value and potential to the small investors. Signaling theory is used to study the impact of campaign characteristics, online updates during the campaign, entrepreneurs' information cascade and textual information on campaign success and fund raised (Wasti et al; 2024; Sendra-Pons et al., 2023; Huang et al., 2022; Kleinert et al., 2022; Chakraborty and Swinney, 2021; Johan and Zhang, 2020; Bapna, 2019). Signals of quality positively influence investing decision of the funder (Bi, Liu, and Usman, 2017). It is observed that entrepreneurs who sell smaller fraction of their companies at listing and has more social capital, have higher probability for a successful campaign (Vismara, 2015).

United Kingdom has been the fastest growing country in the world for equity crowdfunding campaigns in terms of the number of campaign and amount raised. It is because of regulatory framework that has been in place since 2011 and investors of start-ups also benefit from tax incentives via Enterprise Investment Scheme (EIS) and Seed Enterprise Investment Scheme (SEIS). Tax incentives schemes help UK based small companies to raise funds by offering tax relief on new share shares in those small companies. Because of these reasons, UK provides us an opportunity to explore the phenomenon of investors' investment decision in equity crowdfunding. This study uses a unique dataset from Crowdcube, UK based world largest equity crowdfunding platform, was founded in 2011. Campaign characteristics and directors' information are signal of campaign quality. This study defines the signal of quality as central route to assess the investors' attention to influence investors' decision to invest in equity crowdfunding campaigns. Various regression exercises have been performed to analyze the factors associated with investors' investment decision in equity crowdfunding campaigns.

This study enhances the literature related to efforts that examine the success factors in equity crowdfunding by exploring empirically the most important factors responsible for overfunded campaign success. As crowdfunding is an emerging field of research, most of the preliminary literature is based on exploratory research method (Schwienbacher and Larralde, 2012; Ordanini et al., 2011). Existing literature lacks in underlying theories and theoretical model in crowdfunding. This study is one of the few studies introducing signaling theory to the crowdfunding for the formation of theoretical model to explore the factors affecting investors' decision to invest in campaign and result in overfunded campaign success in the context of equity crowdfunding. An investor or funder when want to invest has to face variety of information about the campaign to decide whether to invest or not. When an investor is exposed to information and messages, quality signals theorizes how the message influences investors' attitude formation and his or her behavior (Ho and Bodoff, 2014). Thus signaling theory is an appropriate theoretical base to model the factors that influence investors' attitude formation towards crowdfunding platform project information. This study develops a theoretical model to examine the effect of quality signals on investing decision of the investors to invest in campaign those results in overfunded campaign success.

LITERATURE REVIEW

Crowdfunding

Crowdfunding is an emerging field of study and the complete definitions are arbitrarily limited because the popular and academic conceptions of crowdfunding are in a state of evolutionary flux. Schwienbacher and Larralde (2012) define Crowdfunding as, " an open call, essentially through the internet, for the provision of financial resources either in the form of donations or in exchange for some form of reward and/or voting rights in order to support initiatives for specific purposes." But even expansive, this definition potentially excludes examples that are labeled as crowdfunding by scholars in various fields including internet based peer to peer lending (Viswanathan and Lin, 2013). Molick (2014) defines that, "Crowdfunding refers to the efforts by entrepreneurial individuals and groups, cultural, social, and for profit, to fund their ventures by drawing on relatively small contributions from a relatively large number of individuals using the internet, without standard financial intermediaries". Crowdfunding is a method to use the broader crowd for ideas and capital in order to develop ventures for corporate actions and future earnings (Molick, 2014; Belleflamme et al., 2014).

Companies and ventures when in start-up stage, fail to convince institutional and traditional financing agents for funding, can use the tool of crowdfunding for generating funds (Molick, 2014). So in crowdfunding, small businesses are directly financed by large group of individuals (Crowd) with small amounts instead of traditional funding sources (business angel, banks and other investors) with large amounts. As the transactions take place through internet, intermediaries are excluded between funders and funded (Belleflamme et al., 2010). Crowdfunding is an open call to the crowd of potential investors for making it possible for the companies to receive funds in exchange for future products, services or equity shares (Belleflamme et al., 2014). There are two main types of crowdfunding; non-financial crowdfunding and financial crowdfunding. In the non-financial crowdfunding there are two methods, donation based and reward-based crowdfunding. In donation based crowdfunding the purpose of crowd of investors to aid a company is donation to the company for any social cause while in reward-based crowdfunding the crowd of investors receives rewards in the form of either products or services (Stigenberger, 2017). Financial crowdfunding includes debt crowdfunding and equity crowdfunding. Here, interest of investors is to fund a company which is seeking funding with a goal to make financial profit. In debt crowdfunding investors give loans to the company in exchange of interest while in equity crowdfunding investors invest in company for equity shares to receive financial profit (Ahlers et al., 2015).

Projects may have a wide range of goals through crowdfunding unlike other forms of venture financing. It is a viable form of funding for entrepreneurial seed capital (Schwienbacher and Larralde, 2010), as early stage investors contribute much more in new venture with governance, advice and prestige than simply funding (Ferrary and Granavetter, 2009). It can be used to demonstrate demand for a proposed product that can lead the firm to get funds from traditional financing if finds more demand from the crowd. In case of a little demand from the crowd, it helps the founder to fail quickly without any additional investment or efforts. Crowdfunding can also be used for marketing of new projects and to create interest in the projects in early stages of development. Crowdfunding platforms are used for crowdfunding. These are internet based platforms to link founders and funders for financing a particular project by many funders. It is the common characteristics of all crowdfunding platforms that founders come here with an aim to have access to additional funding sources. There are different features of the projects and heterogeneous preferences of the funders over these projects, so the crowdfunding platform is a place to provide a matching service between two sides of the market. A crowdfunding campaign requires a numbers of funders to be successful as provided by crowdfunding platforms which makes crowdfunding platforms different from previously existing, some forms of platforms i.e dating and real state for one to one matching. Crowdfunding platforms are investment based platforms, considered as an alternative financial investment instrument for financing start-ups and small and medium enterprises.

Equity Crowdfunding

When there is an opportunity to become shareholders of new ventures, the donation based crowdfunding may not be an important alternative market for a crowd. It is observed in recent trends that donation based crowdfunding models have become less common and now crowdfunding projects offer either reward (products or services) or equity share. It is also observed that equity crowdfunding is best choice when there is large capital requirement (Belleflamme et al., 2014). Di Pietro et al. (2023); Guggenberger et al. (2023); Valenza et al. (2023) suggest that investment-based crowdfunding platforms are alternative financial investment instrument for financing start-ups and small and medium enterprises. Equity crowdfunding is an important financial innovation that allows new ventures and simple projects to raise required capital (Shiller, 2013) and it will become more inevitable (Schewienbacher and Larrralde, 2012). As compare to traditional financiers in which few institutions or a few experienced people play, an equity crowdfunding campaign, because of basing upon internet, can reach a crowd of potential investors easily and quickly (Schwartz, 2013). So there is significantly less cost and risk to each investor in the project than in traditional financing models (Ordanini et al., 2011).

Equity crowdfunding has distinct characteristics that make it a distinct form of crowdfunding from other forms of crowdfunding. However there are some similarities in the features of equity crowdfunding and reward-based crowdfunding. This overlap of some features helps the researcher to study equity crowdfunding by using the literature from neighboring form of crowdfunding. Dorff (2014) uses the approach of leveraging from neighboring literature for further study due to lack of studies in the area of equity crowdfunding. By using this approach, possible success factors for equity crowdfunding are conceptualized through the success factors that are identified for other forms of crowdfunding and these success factors then tested for investors' investment decision in equity crowdfunding. Existing literature identifies three categories of success factors in other forms of crowdfunding, campaign characteristics, network and understandability about the concept. Most of the studies are in the context of reward-based crowdfunding that identify the success factors for successful campaigns. Campaign characteristics include target amount, founders' equity, number of investors, number of followers, documents, largest investment, duration of campaign, industry of the project, founders' profile, idea, pre money valuation, amount raised, pictures and videos about project etc. Network drivers to the success of the campaign include friend and family network, presence on social media, updates on social media, followers on social media, likes and comments about the project etc. Understandability about the business concept is also a success factor that means the consumer oriented project are more understandable to investors than business oriented project. It also include easy and understandable business project, easy language etc.

In previous portion, the term crowdfunding is explained and its various types are defined in detail. The most important theoretical and empirical studies on crowdfunding are discussed comprehensively to find out a research gap. The previous researches are mainly theoretical because of novel field of study and less availability of empirical data (Caputo et al., 2022; De Crescenzo et al., 2020; Mochkabadi and Volkmann, 2020). But some researches are empirical with limitation of limited data. The focus of previous researches is on defining, explaining and exploring crowdfunding, its types and success factors. The main portion of empirical researches is on reward-based crowdfunding and its success factors. There are few researches on equity crowdfunding and a few researches empirically explain the success factors in this type of crowdfunding. The focus of this study is to explore the drives for investors' investment decision that result in overfunded campaign success.

Signaling theory

In order to reduce information asymmetry, fund seekers send quality cues to attract investors (Sendra-Pons et al., 2023; Huang et al., 2022; Kleinert et al., 2022; Chakraborty and Swinney, 2021; Johan and Zhang, 2020; Bapna, 2019; Ahlers et al., 2015). The factors that drive entrepreneurial ventures to successful fundraising have been of the great interest of scholars especially in the venture capital context (Dushnitsky, 2009; Kirsch et al., 2009; Silveman and Baum, 2004; Stuart and Shane, 2002; MacMillan, 1986). The success factors are studied in two parts; success factors in the preparation of crowdfunding project and success factors during a crowdfunding project. Rostamkalaei and Freel (2023); Zhang et al. (2023); Valenza et al. (2023); Vismara (2022) have investigate the impact of information disclosed by entrepreneurs for investors to make investment decision and conclude that information provided by entrepreneurs works as quality signals and positively influence investors investment decision. Some factors are identified in the preparation of the projects that lead to success. Investors make decisions on partial information about a particular venture because of uncertainty of investment. Uncertain and unreliable data about a new venture is a potential signal of quality in the selection process (Michael, 2009). Similarly there are several key quality signals identified by researchers that can lead the venture to traditional face to face investment setting including the quality of preparation that an aspiring entrepreneurial demonstrate (Chen et al., 2009; Cardon et al., 2009). It is assumed that signals give insight about the quality of underlying projects as high quality projects are assumed to receive more funds. Thus quality signals not only lead to success of crowdfunding campaign but also influence investors' investing decision to invest in overfunded campaigns. These quality signals must be explored empirically to analyze the impact on investors' investment decision that result in overfunded campaign success in equity crowdfunding.

Information asymmetry between entrepreneur and investor creates uncertainty so reduce the chances of investment in the project (Leland and Pyle, 1977). Entrepreneur needs to send the signal of quality and one way to send the quality signal is to invest one's own project. So the equity offered demonstrates the project value and reduce the uncertainty. Provision of documents and financial is positively associated with success. Literature reveals that provision of documents works as quality signal and reduce uncertainty between entrepreneur and investor. Lack of financial documents reduces the fund raised in reward-based crowdfunding (Molick, 2014). The length of the project description (Kock and Siering, 2015), provision of video (Kock and Siering, 2015; Molick, 2014) are positively affect funding success. Larger word counts in introduction and video count in reward-based crowdfunding make the funder to feel the project of higher quality (Bi, Liu, and Usman, 2017). Number of supporters and backers is a constant factor in the success of crowdfunding campaign (Vukuvic et al., 2010). Largest investment is a signal of quality of the project that enhances the investors' trust in the project. It also helps to reach the target goal thus enhances the chances of success. Updates during the crowdfunding campaign increase the credibility and quality of the project hence enhance the trust of the investors. Updates provide by the entrepreneurs increase the chances of campaign success (Molick, 2014; Hornuf and Schwienbacher, 2018). It is because these factors reduce information asymmetry between founders and funders and develop trust that leads to willingness for investing in the project. These quality signals emerge from campaign characteristics influence investors' investing decision and lead towards high fund raised in equity crowdfunding campaign.

H1. Campaign characteristics positively influence investors' investment decision in equity crowdfunding.

Researchers have revealed that human capital is significant factor in venture success (Unger, Rauch, Freese and Rosenbush, 2011). Mart´ınez-G´omez et al. (2020); Lukkarinen et al. (2016); Vismara (2016) have revealed that team size in equity crowdfunding is positively related with campaign outcomes. Number of supporters and backers is a constant factor in the success of crowdfunding (Vukuvic et al., 2010). Directors' nationalities show that the board is diverse in expertise so has the ability to face the challenges of business operations (Wiersema and Bental, 1992). Personal information of the owners of the project including pictures has positive effect on campaign success (Boeuf et al., 2014). Study on venture capitalists explores that experience and management skills are the most important criteria for investment selection (Zacharakis and Meyer, 2000). There is positive impact of entrepreneurial (project owner) personal information and number of backers (Boeuf et al., 2014). Educational background of the team member is effective signal for investors (Levie and Gimmon, 2008). Number of pictures (Kock and Siering, 2015) positively affects funding success. So there is relationship between directors' information and investors' investment decision. Projects launched by a fundraiser previously, is an important factor for the success of ongoing crowdfunding campaign. It is observed that number of projects that a fundraiser has launched previously is significantly associated with the number of backers that a project will get (Lichtig, 2015).

H2. Directors' information positively influences investors' investment decision in equity crowdfunding.

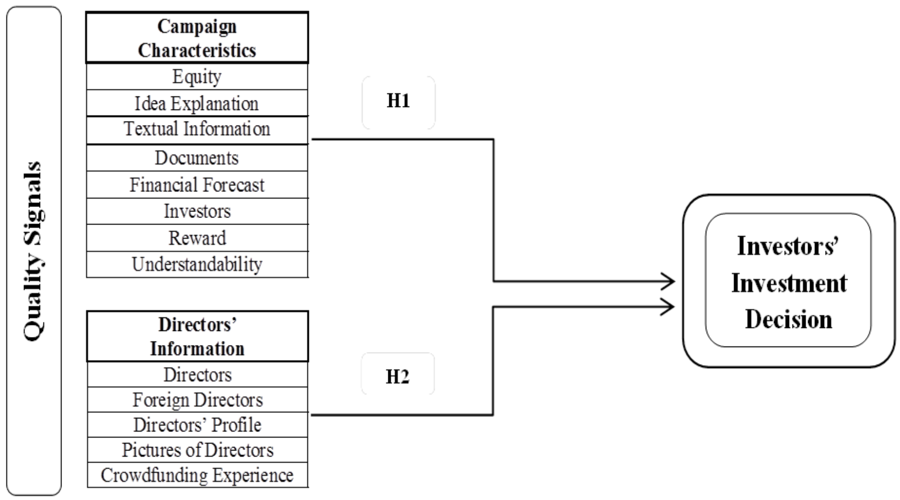

Figure 1: Conceptual framework

Conceptual framework has been drawn to summarize the above explained literature. Figure 1 is showing conceptual model to explore the impact of quality signals (campaign characteristics and directors' information) on investors' investment decision that leads to overfunded campaign success. Fund raised in successful campaign, is used to measure investors' investment decision, is dependent variable in this model while campaign characteristics and directors' information (quality signals) are independent variables.

DATA AND RESEARCH METHOD

Data and method

This study uses the data from world largest UK based equity crowdfunding platform (Crowdcube, 2020) 'Crowdcube' from 2015 to 2024. Crowdcube equity crowdfunding platforms, is authorized and regulated by the Financial Conduct Authority of the United Kingdom. Crowdcube is working in an "all-or-nothing" model. It means that only when the target amount is reached then the investors pledge the money. Crowdcube (2020) reports that this platform has raised £1 B for 1120 successfully funded projects. There are 900,000 registered members (Crowdcube, 2020) and an average investment amount is £692,000 for a project. To explore the reasons for investors' investment decision in equity crowdfunding campaigns, the sample includes 750 out of 800 overfunded successful campaigns from 2015 to 2024 that raised funds from 101% to 840% of target amount. 50 campaigns are excluded because of incomplete data. Crowdcube provides specific place to each campaign on website where fund seeker post information for investors. Thus, data about campaign characteristics to capture impact of quality signals has been collected from campaign page on Crowdcube. The other quality signals are directors' information that has been retrieved from Companies House where every company legally bound to provide legal documents.

Econometric model

To explore the relationship between dependent and independent variables empirically, following are the econometric models for regression analysis.

$$\text{Fund Raised}_i = \beta_0 + \beta_1 \text{ Equity} + \beta_2 \text{ Textual Information} + \beta_3 \text{ Idea Description} + \beta_4 \text{ No of Documents} + \beta_5 \text{ Importance of Documents} + \beta_6 \text{ No of Investors} + \beta_7 \text{ Largest Investment} + \beta_8 \text{ Updates} + \epsilon_i \qquad \text{Eq. 1}$$

Fund Raised $_i$ = β_0 + β_1 No of Directors + β_2 Directors' Description + β_3 No of Foreign Directors + β_4 Directors' Pictures + β_5 Directors' CF Exp + ϵ_i Eq. 2

Fund Raised $_i$ = β_0 + β_1 Equity + β_2 Textual Information + β_3 Idea Description + β_4 No of Documents + β_5 Importance of Documents + β_6 No of Investors + β_7 Largest Investment + β_8 Updates + β_9 No of Directors + β_{10} Directors' Description + β_{11} No of Foreign Directors + β_{12} Directors' Pictures + β_{13} Directors' CF Exp + ϵ_i Eq. 3

Variables of the study

Dependent variable

Fund Raised is used to measure investors' investment decision in equity crowdfunding. Fund raised is the total fund offered by investors against the target amount of the campaign. It is noticed that when campaigns successfully reach the target amount and declared as successful campaigns, some of them still continue to attract more investors and become overfunded from 101% to even 840% of target amount.

Control variable

Target Range is the estimation of the required fund for a project. Crowdcube allows raising funds from £5,000 to £2,000,000. It has been taken in currency amount.

Age of the firm at the time of campaign launched has been taken from Companies House, registrar for the limited companies where companies legally bound to submit periodic reports.

Independent variable

Equity Offered is the initial investment offered by the entrepreneurs for the project. Equity offered influence the campaign success because it shows the entrepreneurs commitment to the project thus influence the investors' decision to invest in the project. Equity offered has been taken in percentage to the target amount.

Textual information includes the description, pictures and videos about the project. Binary variable is used where campaigns with all three ingredients of textual information are measured with "1" otherwise "0".

Length of idea description means how thoroughly idea with necessary information has been explained. It has been measure in number of words in idea description.

Provision of Documents is a great source of building a trust in the investors about the project because investors can understand the idea of the project and capabilities of the team. It has been taken in number of documents that company has provided on Companies House.

Importance of documents means whether financial documents provide information about future earning capacity or not. If financial documents provide forecasted revenue and EBITDA, then it is (1), but if documents do not provide such information then it is (0).

Number of Investors is the total investors who have invested in a specific campaign. Number of investors result in overfunded campaign success of the project. It has been taken in numbers.

Largest Investment is the largest single offering for the project from any investor. It influences the campaign success because it builds the trust about the project and thus attracts large number of investors. It has been taken in amount provided at Crowdcube.

Updates during the campaign is influencing factor in success. It is because an update regarding the project encourages the investors to go for the investment. It has been taken in numbers of updates on Crowdcube page of a campaign.

Number of directors at the time of campaign is the total number of directors of the company when campaign has been launched.

Directors' description is the background information about the company directors that include qualification, professional education, work experience and professional achievements. It has been taken as binary variable and measured "1" when comprehensive information provided otherwise "0".

Number of foreign directors has been taken from Companies House where information about directors' nationality has been provided.

Number of pictures of directors is influencing factor in fund raising as well because it develops trust in the investors. Number of pictures has been taken from Crowdcube page of the campaign.

Directors' crowdfunding experience means whether the directors or any director in the team of the firm has experience of launching crowdfunding campaign. It has been measured in binary variable with "1" when there is team of having crowdfunding experience otherwise "0".

RESULTS AND DISCUSSION

Results

Summary of descriptive statistics of all data set is presented in Table 1. Correlation analysis has been done to explore the correlation between dependent and independent variables. It can be seen from Table 2, correlations between dependent and independent variables are significant and positive with dependent variable. Fund Raised shows significant positive correlation with all campaign characteristics. Fund raised also shows significant and positive correlation with directors' information. Correlations analysis therefore supports all hypotheses.

Table 1: Descriptive statistics of dependent and independent variables

Variables	Observations	Mean	Maximum	Minimum	Std. Dev.
Fund Raised	750	683162	25000000	22000	683162
Age	750	5.15	25	1	3.26
Target	750	406063.8	20000000	22000	843382.4
Equity	750	13.14	55.27	1	8.73
Idea Description	750	1252.28	4813	0	653.06
Textual Information	750	0.81	1	0	0.38
No of Filing	750	23.84	170	1	23.54
Imp of Doc	750	0.57	1	0	0.47
No of Investors	750	474.85	6700	3	736.55
Largest Investment	750	145215.2	3900000	1000	327980.1
Updates	750	12.13	71	0	9.15
No of Directors	750	2.93	15	1	1.98
No of Foreign	750	0.94	10	0	1.44
Dir Description	750	0.62	1	0	0.42
No of Pics	750	2.87	16	0	2.59
Dirs' CF Exp	750	0.22	1	0	0.45

This study estimates the impact of campaign characteristics and directors' information (quality signals) on fund raised (investors' investment decision). Linear regression analysis is used to explore the relationship between the constructs. Hierarchical regression analysis is also used to find out the most influencing factors on dependent variables. Table 3 shows the results of regression analysis between dependent and independent variables. In model 1, there are just two control variables

Table 2: Correlation between variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Fund Raised	1															
Age	0.021	1														
Target	0.025	0.094	1													
Equity	0.077**	-0.038	-0.095***	1												
Textual Information	0.323***	-0.067*	-0.061*	0.062*	1											
Length of Idea Description	0.276***	0.207***	0.003	0.116***	0.125***	1										
No of Documents	0.450***	0.547***	0.304***	-0.178***	0.128***	0.141***	1									
Importance Of Documents	0.342***	0.103***	0.032	0.141***	0.295***	0.383***	0.158***	1								
No Of Investors	0.211***	0.018	0.877***	-0.089**	-0.003	-0.003	0.305***	0.067*	1							
Largest Investment	0.189***	0.105***	0.394***	0.006	0.014	0.037	0.367***	0.056	0.176***	1						
No of Updates	0.115***	-0.059*	-0.018	-0.098***	0.042	-0.145***	0.033	-0.034	-0.035	0.008	1					
No of Directors	0.472***	0.163***	0.248***	-0.080**	0.103***	0.230***	0.557***	0.195***	0.253***	0.274***	-0.046	1				
Directors' Description	0.363***	-0.039	-0.004	0.081**	0.409***	0.275***	0.132***	0.330***	0.025	0.089**	-0.027	0.128**	1			
No of Foreign Directors	0.387***	0.083**	0.168***	-0.068*	0.070*	0.219***	0.355***	0.140***	0.187***	0.181***	-0.043	0.386**	0.139**	1		
No of Pics of Directors	0.318***	-0.166***	0.080**	-0.106***	0.264***	-0.128***	0.230***	0.110***	0.121***	0.184***	0.163**	0.171**	0.171**	0.117**	1	
Directors' CF Experience	0.345***	0.069*	0.166***	-0.204***	0.078**	0.038	0.424***	0.087**	0.210***	0.164***	0.007	0.344**	0.172**	0.176**	0.242**	1

Model 2 shows the relationship between campaign characteristics and fund raised in which independent variables are explaining 54.4% variance in fund raised. F value for model 2 is 93.84 significant ($p<0.01$) and beta coefficients of eight independent variables are 0.774 ($p<0.01$) for equity, 25.49 ($p<0.01$) for textual information, 0.018 ($p<0.01$) for length of idea description, 1.53 ($p<0.01$) for number of documents, 20.89 ($p<0.01$) for importance of documents, 0.041 ($p<0.01$) for number of investors, 0.005 ($p<0.01$) for largest investment and for updates is 0.86 ($p<0.01$). These beta coefficients are positive and significant in relation to fund raised. Independent variables in Model 3 are explaining 41% variance in fund raised with F value of 78.706 ($p<0.01$) and significant. Beta coefficients of independent variables are 12.157 ($p<0.01$) for number of directors, 37.976 ($p<0.01$) for directors' description, 10.925 ($p<0.01$) for number of foreign directors, 5.216 ($p<0.01$) for number of pictures and 23.321 ($p<0.01$) for directors' crowdfunding experience. These beta coefficients are positively significant in relation to fund raised.

Combined effect of hierarchical variable is also examined to explore the most influential variables in fund raised. Model 4 is explaining the result of combined effect of Model 2 and Model 3 with F value 81.746 Significant ($p<0.01$). Campaign characteristics and directors' information are explaining 60.7% variance which shows that combined impact of campaign characteristics and directors' information is higher than the individual impact of these two hierarchical variables. But increase in adjusted R^2 due to directors' information is only 6.3%. It means that campaign characteristics are more influential factor in fund raised than the directors; information. All independent variables have significant and positive impact on fund raised. .

Table 3: Hierarchical multiple regression analysis

Hierarchical Variables	Estimate Variables	(1) Mode 1	(2) Model 2	(3) Model 3	(4) Model 4
Control Variables	Age	0.437 (0.827)	-5.507*** (0.725)	-0.161 (0.657)	-2.546*** (0.726)
	Target	0.002 (0.003)	-0.007*** (0.005)	-0.001*** (0.002)	-0.007*** (0.005)
Campaign Characteristics	Equity		0.774*** (0.235)		0.954*** (0.221)
	Textual Information		25.495*** (5.111)		16.288*** (5.077)
	Length of Idea Description		0.018*** (0.003)		0.012*** (0.003)
	No of Documents		1.531*** (0.112)		0.755*** (0.127)
	Importance Of Documents		20.891*** (4.155)		14.108*** (3.923)
	No Of Investors		0.041*** (0.003)		0.038*** (0.003)
	Largest Investment		0.005*** (0.007)		0.004*** (0.006)
	No of Updates		0.863*** (0.204)		0.0807*** (0.191)
Directors' Information	No of Directors			12.157*** (1.240)	6.430*** (1.126)
	Directors' Description			37.976*** (4.507)	6.997*** (1.325)
	No of Foreign Directors			10.925*** (1.574)	17.501*** (4.173)
	No of Pics of Directors			5.216*** (0.877)	3.389*** (0.781)
	Directors' CF Experience			23.321*** (5.121)	13.643*** (4.431)
Summary of the Model	F	0.393	93.840***	78.706***	81.746***
	R^2	0.001	0.548	0.415	0.615
	ΔR^2	0.001	0.542	0.410	0.607

Standard error in parenthesis

***p<0.01, **p<0.05, *p<0.1

DISCUSSION

This study investigates the factors impacting investors' investment decision in equity crowdfunding and which types of characteristics are more influential in investors' investment indecision making process. The results show (Table 3) that campaign characteristics and directors' information (quality signals) have significant positive relationship with fund raised (investors' investment decision). Model 1 shows two control variables age and target. Age is controlled because new as well as existing firms can raise funds through equity crowdfunding. Existing firms are much more established than new one and also have lot of age variation that can influence investor decision due to their previous business operations. Thus age of firm is controlled to examine the impact of quality signals on investors' investment decision. Target is also controlled due to lot of variation in target fund to achieve because Crowdcube allow raising funds from £5000 to £2000000. Small targets are generally considered to be more overfunded success. Thus to examine the impact of campaign characteristics and directors' information, funding target is controlled. There are eight estimate variables of campaign characteristics to examine the impact of quality signals on fund raised in Model 2. Equity is the amount offered by entrepreneur at the time of launching the campaign. Results show that with the increase in equity offered, there is increase in fund raised in the campaign. So equity is quality signal that influence investors' investment decision in equity crowdfunding.

Textual information is the provision of idea detail, video message and pictures of the team. Findings support the hypothesis that textual information increases the fund raised during a campaign because of giving maximum information to investors. Textual information reduces information asymmetry thus work as quality signal and influence investors' decision to invest in the project and leads the campaign towards overfunded campaign success.

Length of idea description is positively and significantly impacting fund raised. Entrepreneurs describe idea to give investors thorough understanding about the project. Well explained idea makes it easy to take investing decision and thus results in high fund raising. Number of documents has positive and significant impact on investors' decision. Private Firms in UK are legally bound to report legal and financial documents on Companies House and investors can access these documents to take investing decisions. Some firms report maximum number of legal and financial documents and some just reports minimum number of documents to meet legal criteria. Number of documents reduce information asymmetry and makes it easy for investors to invest in a project results in high fund raising. Importance of documents has positive and significant impact on fund raised because when founders report forecasted financial statements; it enables investors to analyze the future earning capacity of the project. Thus investors can make investing decision on the basis of financial forecast and results in overfunded campaign success. Number of investors influences fund raised positively and significantly because increase in number of investors not only contribute more in funding but also attract more investors due to herding effect. Largest investment is single large investment in a specific project. Largest investment has significant and positive impact on fund raised because of large contribution in fund raising. Largest investment also gives a cue of angel investor in the projects that develop trust of the investors to invest in the project and leads to high fund raising. These findings are in line with previous research in crowdfunding context by Wasti et al. (2024); Wasti and Ahmed (2023); Carbonara (2021); Anindyaswari and Wijaya (2020); Mart´ınez-G´omez et al. (2020); Moedl (2019); Vismara (2019); Liu, and Usman and Bi (2017); Lukkarinen et al. (2016); Kock and Siering (2015); Molick (2014). The findings of this study support the hypothesis 1 that quality signals emerge from campaign characteristics positively influence investors' investment decision in equity crowdfunding.

Findings in Model 3 show significant positive impact of quality signals emerge from directors' information on fund raised. Number of directors has significant and positive impact on fund raised because it represents the size of team and its diverse expertise. Large size team and diversity in expertise work as quality signal that the team of the project has the capacity to meet the future business challenges. It develops trust in the investors while making investment decision. Founders when launch campaign give detail information of managing team. This information includes directors' role, qualification, special expertise, professional experiences and professional achievements. But there are number of campaign where detail information of team is missing. Detail information of directors gives investors to know about the expertise and capacity of managing team to run the business thus attracting investors to invest in the project results in high fund raising. Number of foreign directors is significantly and positively influencing fund raised because diverse nationality of directors works as signal to investors that the team has capacity and ability to face the operational challenges. Thus findings shows increase in fund raising with the increase in number of foreign directors. Number of pictures of the team influences fund raising significantly and positively. As detail information of directors and managing team enables investors to valuate worth of managing team, thus, pictures of the team management enhances the trust of investors that results in high fund raising. Directors' crowdfunding experience also influences fund raised positively and significantly because experience of team is most important criteria in investment selection. Presence of directors in management team having crowdfunding experience attracts more investors thus results in overfunded campaign success. These findings of Model 3 are in line with previous research in venture capital and crowdfunding context by Wasti et al. (2024); Wasti and Ahmed (2023); Mart´ınez-G´omez et al. (2020); Anindyaswari and Wijaya (2020); Vismara (2018); Lukkarinen et al. (2016); Bernardino and Santos (2016); Kock and Siering (2015); Lichtig (2015); Vismara (2015); Boeuf et al.,(2014); Unger et al., (2011); Vukuvic et al., (2010); Levie and Gimmon (2008); Zacharakis and Meyer (2000); Wiersema and Bental (1992). Thus finding of this study support hypothesis 2 that directors' information (quality signals) positively influences fund raised (investors' investment decision) in equity crowdfunding.

Combine impact of hierarchical variables is examined in Model 4 to find out more influencing variables in fund raised. Findings in Model 4 show that quality signals emerge from campaign characteristics are more influencing factors in investors' investment decision because campaign characteristics explain 54.2% variance in fund raised but after including directors' information variables, the explained variance is 60.7 with an increase of 6.3% only. This means the influence of campaign characteristics on fund raised is more than directors' information. These findings give understanding that investors pay more attention to quality signals emerge from campaign characteristics while selecting project and making investing decisions.

CONCLUSIONS

Investors' trust is an important factor in equity crowdfunding success and considered as funders' success in attracting large number of investors, thus large amount raised than target. This study gives an insight into the impact of quality signals on investors' investment decision that result in overfunded campaign success in equity crowdfunding. This study suggests focusing on campaign characteristics in order to send quality signals to potential investors for attracting them to invest in the campaign. It is because campaign characteristics are the first information that investors can access on platform to select the investment opportunity. Directors' information is also work as quality signal and important in influencing investors' decision but findings suggest that campaign characteristics are more influential than directors' information. These findings help out founders to know the factors to focus while launching new campaigns and not only to reach target but to get the campaign considerable overfunded.

LIMITATIONS

This study is not free from limitations. First limitation of this study is to focus only equity crowdfunding ignoring other form of crowdfunding such as reward-based crowdfunding and peer to peer lending. Fund raising is also phenomenon of other form of crowdfunding must be explored. Secondly this study uses data from single crowdfunding platform as there are other equity platform as well in UK and many other countries. Data from other platforms can reduce data limitation problem and result may more generalized. Third this study uses two hierarchical variables and their impact is explored with thirteen estimate variables. There are other number of factors may be significant in investors' investment decision making process.

Implications for Research

Empirically this study is an important contribution in the literature and opens up new ventures for empirical research in the field of equity crowdfunding. It is because the field of crowdfunding is still very new and limited literature available about this area of research mainly in reward-based crowdfunding and other forms of crowdfunding. Literature in crowdfunding is also lacking in empirical research especially in the context of equity crowdfunding. In last few years, crowdfunding has got market popularity as an alternative funding option to the traditional financing institutions i.e. banks and venture capitalist etc. The rapid increase in popularity attracts the researcher to go for exploring this newly born field of finance for enhancing its understanding and literature. This research enhances the literature in new aspects of equity crowdfunding quality signals and investors' trust empirically and opens up new avenue of research for future researchers. Future research may be conducted on larger sample size form different countries to replicate the results and to explore other affecting factors on investors' investment decision.

Implications for practice

The findings of this research are very helpful practically for both entrepreneurs as well as investors while using crowdfunding platforms. These findings give practical solutions for different issues face by entrepreneurs and investors. This study is not only helpful for entrepreneurs and founders to overcome the factors that cause failure of campaigns but also helpful to raise more funds than target to meet day to day business challenges and to control liquidity problem for project. It helps to focus on success factors to get a campaign successful because only the successful campaign is carried forward for launching its project while unsuccessful campaign is withdrawn. This study helps the investors to evaluate a project and to choose the good project that seems to be successful and that has the potential for future performance because of having good quality signals.

REFERENCES

Ahlers, G. K. C., Cumming, D., Günther, C., and Schweizer, D. (2015). Signaling in Equity Crowdfunding. *Entrepreneurship: Theory and Practice*, *39*(4), 955–980. https://doi.org/10.1111/etap.12157

Anindyaswar, S., and Wijaya, C. (2020). The Effect of Project Quality and Level of Uncertainty on Micro, Small, and Medium Enterprises' Funding in Equity Crowdfunding. *Journal of Applied Economic Sciences*, 437–445. https://www.ceeol.com/search/article-detail?id=894706

Bahlous-Boldi, M. (2021). Agency costs and credit availability: an international study. *European Journal of Management and Business Economics*, *31*(3), 285–304. https://doi.org/10.1108/EJMBE-06-2020-0175

Bantel, K. a., and Wiersema, M. F. (1992). Top management team demography and process. *The Academy of Management Journal*, *35*(3), 91–121.

Bao, L., Wang, Z., and Zhao, H. (2022). Who said what: Mining semantic features for success prediction in reward-based crowdfunding. Electronic Commerce Research and Applications, 53:1–13.

Bapnaa, S. (2019). Complementarity of signals in early-stage equity investment decisions: Evidence from a randomized field experiment. *Management Science*, *65*(2), 933–952. https://doi.org/10.1287/mnsc.2017.2833

Belleflamme, P., Lambert, T., and Schwienbacher, A. (2012). Individual Crowdfunding Practices. *SSRN Electronic Journal*, *2012*. https://doi.org/10.2139/ssrn.2151179

Belleflamme, P., Lambert, T., and Schwienbacher, A. (2014). " Crowdfunding : Tapping the right crowd. *Journal of Business Venturing*, *29*(5), 585–609. https://doi.org/10.1016/j.jbusvent.2013.07.003

Belleflamme, P., Thomas Lambert, and Schwienbacher, A. (2010). Crowdfunding: An Industrial Organization. *Prepared for the Workshop Digital Business Models: Understanding Strategies, Paris, France.*

Bernardino, S., and Santos, J. F. (2016). Financing social ventures by crowdfunding: The influence of entrepreneurs' personality traits. *International Journal of Entrepreneurship and Innovation*, *17*(3), 173–183. https://doi.org/10.1177/1465750316655903

Bi, S., Liu, Z., and Usman, K. (2017). The influence of online information on investing decisions of reward-based crowdfunding. *Journal of Business Research*, *71*, 10–18. https://doi.org/10.1016/j.jbusres.2016.10.001

Boeuf, B., Darveau, J., and Legoux, R. (2014). Financing creativity: Crowdfunding as a new approach for theatre projects. *International Journal of Arts Management*, *16*(3), 33–48.

Bradford, C. (2012). The New Federal Crowdfunding Exemption: Promise Unfulfilled. *Securities Regulation Law Journal*, *40*(3), 1–58.

Cameron, P., Corne, D. W., Mason, C. E., and Rosenfeld, J. (2013). Crowdfunding genomics and bioinformatics. *Genome Biology*, *14*(9), 3–7. https://doi.org/10.1186/gb-2013-14-9-134

Caputo, A., Schiocchet, E., and Troise, C. (2022). Sustainable business models as successful drivers in equity crowdfunding. *Business Strategy and the Environment*, *31*(7), 3509–3522. https://doi.org/10.1002/bse.3102

Carbonara, N. (2021). The role of geographical clusters in the success of reward-based crowdfunding campaigns. *International Journal of Entrepreneurship and Innovation*, *22*(1), 18–32. https://doi.org/10.1177/1465750320918385

Cardon, M., Sudek, R., and Mitteness, C. (2009). The impact of perceived entrepreneurial passion on angel investing. *Frontiers of Entrepreneurship Research*, *29*(2). https://doi.org/10.5465/ambpp.2009.44244277

Chakraborty, S. and Swinney, R. (2021). Signaling to the crowd: Private quality information and rewards-based crowdfunding. Manufacturing & Service Operations Management, 23(1):155–169.

Chakraborty, S., and Swinney, R. (2021). Signaling to the crowd: Private quality information and rewards-based crowdfunding. *Manufacturing and Service Operations Management*, *23*(1), 155–169. https://doi.org/10.1287/MSOM.2019.0833

Chen, X. P., Yao, X., and Kotha, S. (2009). Entrepreneur passion and preparedness in business plan presentations: A persuasion analysis of venture capitalists' funding decisions. *Academy of Management Journal*, *52*(1), 199–214. https://doi.org/10.5465/AMJ.2009.36462018

Chod, J., and Lyandres, E. (2021). A Theory of ICOs: diversification, agency, and information asymmetry. *Management Science, 67*(10), 5969–5989. https://doi.org/10.1287/mnsc.2020.3754

De Crescenzo, V., Ribeiro-Soriano, D. E., and Covin, J. G. (2020). Exploring the viability of equity crowdfunding as a fundraising instrument: A configurational analysis of contingency factors that lead to crowdfunding success and failure. *Journal of Business Research*, *115*(June), 348–356. https://doi.org/10.1016/j.jbusres.2019.09.051

Di Pietro, F., Grilli, L., and Masciarelli, F. (2020). Talking about a revolution? Costly and costless signals and the role of innovativeness in equity crowdfunding. *Journal of Small Business Management*, *61(2)*, 831–862. https://doi.org/10.1080/00472778.2020.1816435

Dorff, M. B. (2013). The Siren Call of Equity Crowdfunding. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.2325634

Dushnitsky, G., and Shapira, Z. (2010). Entrepreneurial finance meets organizational reality: comparing investment practices and performance of corporate and independent venture capitalists. *Strategic Management Journal*, *31*(March), 990–1017. https://doi.org/10.1002/smj

Ferrary, M., and Granovetter, M. (2009). The role of venture capital firms in silicon valley's complex innovation network. *Economy and Society*, *38*(2), 326–359. https://doi.org/10.1080/03085140902786827

Frydrych, D., Bock, A. J., Kinder, T., and Koeck, B. (2014). Exploring entrepreneurial legitimacy in reward-based crowdfunding. *Venture Capital* (16)3, 247–269). https://doi.org/10.1080/13691066.2014.916512

Gabison, G. A. (2015). Equity Crowdfunding: all regulated but not equal. *DePaul Business and Commercial Law Journal*, *13*(3), 359–409. http://search.ebscohost.com/login.aspx?direct=trueanddb=bthandAN=110351967andsite=eds-live

Guggenberger, T., Schellinger, B., von Wachter, V., and Urbach, N. (2023). Kickstarting blockchain: designing blockchain-based tokens for equity crowdfunding. In *Electronic Commerce Research* (Issue 0123456789). https://doi.org/10.1007/s10660-022-09634-9

Hervé, F., Manthé, E., Sannajust, A., and Schwienbacher, A. (2019). Determinants of individual investment decisions in investment-based crowdfunding. *Journal of Business Finance and Accounting*, *46*(5–6), 762–783. https://doi.org/10.1111/jbfa.12372

Ho, S. Y., and Bodoff, D. (2014). The effects of web personalization on user attitude and behavior: An integration of the elaboration likelihood model and consumer search theory. *MIS Quarterly: Management Information Systems*, *38*(2), 497–520. https://doi.org/10.25300/MISQ/2014/38.2.08

Hornuf, L., and Schwienbacher, A. (2018). Market mechanisms and funding dynamics in equity crowdfunding. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.2612998

Huang, L., and Knight, A. P. (2017). Resources and relationships in entrepreneurship : an exchange theory of the development and effects of the entrepreneur-investor relationship. *Academy of Management Review*, *42*(1), 80–102.

Huang, S., Pickernell, D., Battisti, M., and Nguyen, T. (2022). Signalling entrepreneurs' credibility and project quality for crowdfunding success: cases from the Kickstarter and Indiegogo environments. *Small Business Economics*, *58*(4), 1801–1821. https://doi.org/10.1007/s11187-021-00477-6

Ibrahim, N., and Verliyantina. (2012). The model of crowdfunding to support small and micro businesses in indonesia through a web-based platform. *Procedia Economics and Finance*, *4*, 390–397. https://doi.org/10.1016/s2212-5671(12)00353-x

Iqbal, J., M. Shahwar, et al. (2024). "Effect of CO2 Emissions, Human Capital, Foreign Direct Investment, and Trade Openness on Economic Growth in Pakistan." Sociological Research And Innovation **2**(2): 61-83.

Johan, S., and Zhang, Y. (2020). Quality revealing versus overstating in equity crowdfunding. *Journal of Corporate Finance*, *65*, 101741. https://doi.org/10.1016/j.jcorpfin.2020.101741

Kleinert, S., Bafera, J., Urbig, D., and Volkmann, C. K. (2022). Access denied: how equity crowdfunding platforms use quality signals to select new ventures. *Entrepreneurship: Theory and Practice*, *46*(6), 1626–1657. https://doi.org/10.1177/10422587211011945

Koch, J. A., and Siering, M. (2015). Crowdfunding success factors: The characteristics of successfully funded projects on crowdfunding platforms. *23rd European Conference on Information Systems*. https://doi.org/10.18151/7217393

Lehner, O. M. (2013). Crowdfunding social ventures: a model and research agenda. *Venture Capital*, *15*(4), 289–311. https://doi.org/10.1080/13691066.2013.782624

Leland, H. E. and Pyle, D. H. (1977). Informational asymmetries, financial structure, and financial intermediation. The journal of Finance, 32(2):371–387.

Levie, J., and Gimmon, E. (2008). Mixed signals: Why investors may misjudge first-time high technology venture founder. *Venture Capital*, *10*(3), 233–256.

Lichtig, B. (2015). Crowdfunding Success: the short story - analyzing the mix of crowdfunded ventures. *Wharton Research Scholars Journal*, *121*. https://repository.upenn.edu/wharton_research_scholars

Lin, M., Prabhala, N. R., and Viswanathan, S. (2013). Judging borrowers by the company they keep: Friendship networks and information asymmetry in online peer-to-peer lending. *Management Science*, *59*(1), 17–35. https://doi.org/10.1287/mnsc.1120.1560

Lindström, G., and Olofsson, C. (2001). Early stage financing of NTBFs: An analysis of contributions from support actors? *Venture Capital*, *3*(2), 151–168. https://doi.org/10.1080/13691060110042754

Loucks, D. (2013). Will crowdfunding and general solicitation spur orphan drug development for biotechs? *Formulary*, *48*(10), 343–344.

Lukkarinen, A., and Schwienbacher, A. (2023). Secondary market listings in equity crowdfunding: The missing link? *Research Policy*, *52*(1), 104648. https://doi.org/10.1016/j.respol.2022.104648

Lukkarinen, A., Teich, J. E., Wallenius, H., and Wallenius, J. (2016). Success drivers of online equity crowdfunding campaigns. *Decision Support Systems*. https://doi.org/10.1016/j.dss.2016.04.006

Malik, A., M. Shahwar, et al. (2023). "The mediating role of work engagement on the relationship between job security, organizational justice, job embeddedness and turnover intention of Pakistan's textile industry." Current Trends in Law and Society **3**(1): 12-31.

Martínez-Gómez, C., Jiménez-Jiménez, F., and Alba-Fernández, M. V. (2020). Determinants of overfunding in equity crowdfunding: An empirical study in the UK and Spain. *Sustainability (Switzerland)*, *12*(23), 1–31. https://doi.org/10.3390/su122310054

Michael, S. C. (2009). Entrepreneurial signaling to attract resources: The case of franchising. *Managerial and Decision Economics*, *30*(6), 405–422. https://doi.org/10.1002/mde.1460

Mochkabadi, K., and Volkmann, C. K. (2020). Equity crowdfunding: a systematic review of the literature. *Small Business Economics*, *54*(1), 75–118. https://doi.org/10.1007/s11187-018-0081-x

Moedl, M. (2019). Is wisdom of the crowd a positive signal? Effects of crowdfinancing on subsequent venture capital selection. *Max Planck Institute for Innovation and Competition Research Paper*, 15–18.

Mollick, E. (2014). The dynamics of crowdfunding: An exploratory study. *Journal of Business Venturing*, *29*(1), 1–16. https://doi.org/10.1016/j.jbusvent.2013.06.005

Nespoli, C., Kozan, A., Scuotto, V., and Giudice, M. D. (2022). Aimage's entrepreneurial value creation and crowdfunding: Entrepreneurship in times of crisis. The International Journal of Entrepreneurship and Innovation, 23(2):76–85.

Ordanini, A., Miceli, L., Pizzetti, M., and Parasuraman, A. (2011). Crowd-funding: Transforming customers into investors through innovative service platforms. *Journal of Service Management*, *22*(4), 443–470. https://doi.org/10.1108/09564231111155079

Ralcheva, A., and Roosenboom, P. (2020). Forecasting success in equity crowdfunding. *Small Business Economics*, *55*(1), 39–56. https://doi.org/10.1007/s11187-019-00144-x

Rostamkalaei, A., and Freel, M. (2023). Some initial observations on the geography of the supply of equity crowdfunding. *Venture Capital*, *25*(1), 65–90. https://doi.org/10.1080/13691066.2022.2132891

Saadia, R., M. Shahwar, et al. (2023). "Representing Resistance in Abul Hawa's Against the Loveless World." Journal of Arts and Linguistics Studies **1**(3): 429-443.

Schwartz, A. A. (2013). Crowdfunding securities. *Notre Dame Law Review*, *88*(3), 1457–1490.

Schwienbacher, A., and Larralde, B. (2012). Crowdfunding of Small Entrepreneurial Ventures. *SSRN Electronic Journal*, *2010*. https://doi.org/10.2139/ssrn.1699183

Sendra-Pons, P., Mas-Tur, A., and Garzon, D. (2023). Anchor investors and equity crowdfunding for entrepreneurs. *European Journal of Management and Business Economics*. https://doi.org/10.1108/EJMBE-06-2022-0167

Shahwar, M., M. Amin, et al. (2024). "Effect of Job Security and Job Embeddedness on Turnover Intention: A Study of Pakistan's Textile Industry." Governance and Society Review **3**(2): 68–98-68–98.

Shane, S., and Cable, D. (2002). Network ties, reputation, and the financing of new ventures. *Management Science*, *48*(3), 364–381. https://doi.org/10.1287/mnsc.48.3.364.7731

Shiller, R. J. (2013). Capitalism and financial innovation. *Financial Analysts Journal*, *69*(1), 21–25. https://doi.org/10.2469/faj.v69.n1.4

Sigar, K. (2012). Fret no more: Inapplicability of crowdfunding concerns in the internet age and the jobs act's safeguards. *Administrative Law Review*, *64*(2), 473–506.

Sørensen, I. E. (2012). Crowdsourcing and outsourcing: The impact of online funding and distribution on the documentary film industry in the UK. *Media, Culture and Society*, *34*(6), 726–743. https://doi.org/10.1177/0163443712449499

Steigenberger, N. (2017). Why supporters contribute to reward-based crowdfunding. *International Journal of Entrepreneurial Behaviour and Research* 23(2), 336-353. https://doi.org/10.1108/IJEBR-04-2016-0117

Stemler, A. R. (2013). The JOBS Act and crowdfunding: Harnessing the power-and money-of the masses. *Business Horizons*, *56*(3), 271–275. https://doi.org/10.1016/j.bushor.2013.01.007

ul Islam, M. S., A. Khaliq, et al. (2022). "Consumers' Views and Responses Towards Sales Promotion Strategies in Pakistan: Fresh Evidence from Second Generational Approach." International Journal of Management Research and Emerging Sciences **12**(1).

Unger, J. M., Rauch, A., Frese, M., and Rosenbusch, N. (2011). Human capital and entrepreneurial success: A meta-analytical review. Journal of business venturing, 26(3):341–358.

Valenza, G., Balzano, M., Tani, M., and Caputo, A. (2022). The role of equity crowdfunding campaigns in shaping firm innovativeness: evidence from Italy. *European Journal of Innovation Management*, *26*(7), 86–109. https://doi.org/10.1108/EJIM-04-2022-0212

Vismara, Silvio. (2015). Equity retention and social network theory in equity crowdfunding. *Small Business Economics*, *46*, 579-590. https://doi.org/10.2139/ssrn.2654325

Vismara, S. (2018). Information cascades among investors in equity crowdfunding. *Academy of Management Proceedings*, *42*(3), 467-497. https://doi.org/10.5465/ambpp.2015.11519abstract

Vismara, Silvio. (2019). Sustainability in equity crowdfunding. *Technological Forecasting and Social Change*, *141*, 98–106. https://doi.org/10.1016/j.techfore.2018.07.014

Vismara, Silvio. (2022). Expanding corporate finance perspectives to equity crowdfunding. *Journal of Technology Transfer*, *47*(6), 1629–1639. https://doi.org/10.1007/s10961-021-09903-z

Vukovic, M., Lopez, M., and Laredo, J. (2010). PeopleCloud for the globally integrated enterprise. *Lecture Notes in Computer Science (Including Subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*, *6275 LNCS*, 109–114. https://doi.org/10.1007/978-3-642-16132-2_10

Vulkan, N., Åstebro, T., and Sierra, M. F. (2016). Equity crowdfunding: A new phenomena. *Journal of Business Venturing Insights*, *5*, 37–49. https://doi.org/10.1016/j.jbvi.2016.02.001

Wasti, S. M. H. A., & Ahmed, J. (2023). Comparative role of quality signals and social network activities in overfunding: Evidence from equity crowdfunding. *The International Journal of Entrepreneurship and Innovation*, 14657503231170076.

Wasti, S. M. H. A., Ahmed, J., & Khan, M. H. (2024). Role of successive round as a quality signal in equity crowdfunding: Novel evidence from the perspective of investors' preferences. *Plos one*, *19*(3), e0297820.

Weigmann, K. (2013). Tapping the crowds for research funding. *EMBO Reports*, *14*(12), 1043–1046. https://doi.org/10.1038/embor.2013.180

Widding, L. O., Mathisen, M. T., and Madsen, O. (2009). University-affiliated Venture Capital funds: funding of University Spin-Off companies. *International Journal of Technology Transfer and Commercialisation*, *8*(2/3), 229. https://doi.org/10.1504/ijttc.2009.024387

Wieck, E., Bretschneider, U., and Leimeister, J. M. (2013). Funding from the crowd: An internet-based crowdfunding platform to support business set-ups from universities. *International Journal of Cooperative Information Systems*, *22*(3), 1–12. https://doi.org/10.1142/S0218843013400078

Zacharakis, A., Meyer, G. D. (2000). The potential of actuarial decision models: can they improve the venture capital investment decision? *Journal of Business Venturing*, *15*(4), 235–254. https://doi.org/10.1016/j.jbusvent.2004.01.001

Zhang, J., and Wong, P. K. (2008). Networks vs. market methods in high-tech venture fundraising: The impact of institutional environment. *Entrepreneurship and Regional Development*, *20*(5), 409–430. https://doi.org/10.1080/08985620801886406

Zhang, Y., Scholes, L., Fu, K., Hughes, M., and Tang, F. (2023). Equity crowdfunding syndicates and fundraising performance: the effect of human capital and lead investor reputation. *Journal of Small Business and Enterprise Development*. https://doi.org/10.1108/JSBED-06-2022-0282