How relevant is the individual's levels of innovativeness in the investment decisions in equity crowdfunding campaigns?

Investment decisions in equity crowdfunding

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Abstract

Purpose – This study investigates the relationship between the individual's levels of innovativeness (ILI) and the individual's intention to finance (IIF) an equity crowdfunding campaign to understand whether and to what extent individuals' personalities (IP) can foster crowdfunding success.

Design/methodology/approach – OLS models are applied based on survey data collected from 385 US and UK citizen respondents. Further, the baseline relationship between ILI and IIF is broken down on the basis of the interactions with two behavioral characteristics: proactive personality (PP) and openness to experience (OE).

Findings – Results show a positive relationship between individual's levels of innovativeness and the individual's intention to finance an equity crowdfunding campaign. Furthermore, this relationship continues to be positive when moderators are introduced in the models, demonstrating that PP and OE are personal traits that strengthen the main relationship.

Originality/value — Our findings contribute to enriching the stream of literature according to which equity crowdfunding is a helpful tool not only able to bridge the financial gap of companies during the first phase of their life cycle. The findings also contribute to the development of the innovation process, creating also a social identity within the crowdfunding community.

Keywords Equity crowdfunding, Innovation, Entrepreneurship, Investors' perspective, Personal traits **Paper type** Research paper

1. Introduction

Crowdfunding represents a relatively new alternative way to finance new ventures. Based on dedicated web platforms, it allows to collect small contributions from many investors through the web. During the early stage of company life, entrepreneurs usually tend to finance their business using funds coming from their savings, family and friends, and, later, from business angels (Moritz and Block, 2016). A financial gap in this phase is evident (Giakoumelou *et al.*, 2023). Traditional sources of finance are difficult to obtain for companies in the early phase of their life cycle due to the lack of collateral and the high level of uncertainty that still characterizes these companies. From this perspective, crowdfunding



European Journal of Innovation Management © Emerald Publishing Limited 1460-1060 DOI 10.1108/EJIM-03-2022-0124 can represent a suitable alternative to financing new entrepreneurial activities (Robb and Robinson, 2014).

Following Shneor and Munim (2019, p. 56), crowdfunding can be viewed as a "communityenabled financing, drawing on the principles of crowdsourcing, while being adapted into the context of fundraising". Although crowdfunding has become popular in recent years, the phenomenon has its roots in the late nineteenth century. In 1884, due to economic difficulties, it was impossible to complete the construction of the Statue of Liberty in New York, Hence, the editor, Joseph Pulitzer, launched a fundraising campaign to complete the project. More than one hundred thousand dollars were raised, and everyone who participated in the fundraising saw their name appear in the newspaper as a reward; thus, it was possible to complete the project. According to mainstream literature in the field, there are four acknowledged crowdfunding models: donation-based, reward-based, lending-based and equity-based (Ziegler et al., 2018). In particular, equity-based crowdfunding, which represents the focus of this study, "is a form of crowdfunding for entrepreneurs and small business owners that allows them to sell a predetermined amount of their firm equity shares through specific online platforms to a crowd of investors." (Troise et al., 2023b, p. 3). Equity crowdfunding represents the fastest-growing components among crowdfunding types (Walthoff-Borm et al., 2018, p. 514) and "allows entrepreneurs to make open calls for selling equity shares of their startups to the crowd, that is, a large group of investors through the Internet" (Caputo et al., 2022, p. 3510).

In recent years, many studies analyzed the determinants of crowdfunding campaign success, with a particular focus on project- and fundraiser-related factors. Mollick (2014) and Troise et al. (2020) highlighted that human, social and intellectual capital improves the chances of success of a campaign, while Hornuf and Schwienbacher (2018) showed the importance of crowdfunding platforms in determining campaign success. Block et al. (2018b) stressed the importance of updates and comments posted by entrepreneurs and potential investors on the platform in explaining the success of a crowdfunding campaign. Another stream of research studied the role of communication in crowdfunding campaign success (de Larrea et al., 2019: Salvi et al., 2022), due to the crucial role that communication tools play in order to improve the investor's decision-making process (Parhankangas and Renko, 2017; Dorfleitner et al., 2018). However, the role of investors' psychological characteristics in financing decisions in the crowdfunding context is still an open debate; few researchers have analyzed backers' motivations to engage in crowdfunding initiatives and post-pledging satisfaction (e.g. Xu et al., 2016). An in-depth examination of backers' psychology and motivations is necessary due to the influence that it may have on the project's success (McKenny et al., 2017), in order to understand whether personal attitudes and traits can affect the intention to finance crowdfunding projects.

Crowdfunding is not just a source of funding for new businesses; it represents a valuable tool that fosters innovation. According to Bargoni et al. (2022), "the spread of crowdfunding as a medium to boost entrepreneurial innovation is mainly due to two aspects: the ability to finance innovation at lower costs than traditional forms of financing and the ability to test innovative projects outside the boundaries of the organization in which they have been developed." Crowdfunding is inspired by crowdsourcing and microfinance and can represent a tool capable of reducing the financial gap and the difficulty of startups in raising funds (Salvi et al., 2022), fostering the innovation process and providing funds for the early stage of innovative ventures. Innovation represents a fundamental source of economic growth, and entrepreneurs are able to contribute significantly to the innovation development process (King and Levine, 1993; Block et al., 2018a). Startups, particularly new high-tech ventures, play a crucial role in this process, and crowdfunding can significantly contribute to its development (Hervé and Schwienbacher, 2018). Hence, a higher degree of perceived innovation in a project may correspond to a greater propensity for financing the campaign. Furthermore, in this study, we also consider two specific personality traits of investors: proactive personality and openness to experience (Langer and Abelson, 1983; McCrae, 1993;

McCrae and Greenberg, 2014). We investigate the effects of these personality traits when associated with specific investors' behavior to answer the following research questions:

- RQ1. What is the role of an individual's levels of innovativeness in equity crowdfunding investment decisions?
- RQ2. What role do personalities have in equity crowdfunding investment decisions?

A survey has been carried out among 385 potential investors in equity crowdfunding projects through the Prolific web platform to achieve the research objectives. Results showed that the individuals' level of innovativeness positively influences the intention to finance an equity crowdfunding campaign. In addition, participant's proactive personality and openness to new experiences play an essential role in the investment decision choice. Based on the empirical results, we contribute to crowdfunding literature and the investors' characteristics in crowdfunding campaigns. In particular, individuals' level of innovativeness is an aspect that influences individual investment decisions. Moreover, the aforementioned relationship is moderated by the backers' personalities. Our study also has critical implications for practice. Our evidence suggests that crowdfunding platforms and entrepreneurs should carefully consider backers' attitudes and personalities.

This study is structured as follows. The first part presents the analysis of the literature, the theoretical background and the development of hypotheses. Following, the methodology with the description of the sample and the variables are reported. These parts are followed by the analysis of the results. The study concludes by discussing the results, highlighting contributions and implications. Finally, the limits of the work and future lines of research are reported.

2. Literature review and hypotheses development

2.1 Innovation and crowdfunding

Crowdfunding is a type of fundraising that can provide financial resources to firms in the first phase of their life cycle (Agrawal et al., 2015). Crowdfunding differs from the traditional source of finance, such as business angels and venture capital, because backers often lack financial expertise (Ahlers et al., 2015; Chan and Parhankangas, 2017). The most common types of crowdfunding are donation-, reward-, debt- and equity-based. In donation-based crowdfunding, backers provide capital without any reward or compensation essentially based on social and philanthropic motivations. In reward-based crowdfunding, backers are rewarded by receiving products or services (non-monetary rewards) before anyone else. On the other hand, in debt-based crowdfunding, bakers earn returns through interest payments from borrowers within a specific time. Lastly, in equity-based crowdfunding, which is the subject of this study, backers become shareholders by buying an ownership stake in a company (Ziegler et al., 2018).

Overall, crowdfunding aims to fill the financial gap typical of startups and SMEs, allowing entrepreneurs to finance their business ideas. This funding gap is mainly due to the information asymmetry and moral hazard that investors face when they decide to finance new ventures; in fact, the latter are characterized by a lack of collateral or guarantees that make accessing traditional financing channels hard (Cosh *et al.*, 2009). Dedicated web platforms act as an intermediary between entrepreneurs and backers to raise funds, financing business projects or ideas with small investments raised by many investors, that is the crowd. In addition, using the Internet, it is possible to reduce brokerage costs, allowing entrepreneurs to benefit for their business ventures (Leboeuf and Schwienbacher, 2018). Indeed, crowdfunding platforms play a critical role in the crowdfunding campaign success, providing excellent visibility of the projects, standardizing the selection and investment process and facilitating the launch of the campaigns. As pointed out by Hornuf and Schwienbacher (2016), the role of platforms is different from that of traditional intermediaries

(e.g. banks) because platforms are a place where the information is available to reduce costs for both entrepreneurs and investors. Moreover, crowdfunding allows entrepreneurs and investors to be closely interconnected throughout the campaign, breaking down all geographical boundaries (Popescul *et al.*, 2020). According to Troise *et al.* (2023a), equity crowdfunding is a useful tool that can provide financial resources but also play a crucial role in enhancing internationalization activities and strategies and provide new knowledge and exploitable networks for SMEs. Crowdfunding can bridge the funding gap by decreasing restrictions, removing barriers and spreading and promoting innovation (Mollick and Robb, 2016; Battisti *et al.*, 2020).

In addition to providing funding sources, crowdfunding can help entrepreneurs finance their innovative ideas (Riedl. 2013), sharing the latter with customers and potential investors creating a community (Rodriguez-Ricardo et al., 2018). Equity crowdfunding can represent a valid source of knowledge-based inputs, capable of fostering the sustainability-oriented innovation process, for firms operating in the agri-food industry (Troise et al., 2021). According to Bargoni et al. (2022), "new forms of collective financing have paved the way for users to put themselves in the shoes of venture capitalists and for inventors to become entrepreneurs changing the paradigm by which innovation is fostered within companies." Using equity crowdfunding, entrepreneurs benefit from the network, skills and knowledge of potential investors, and the platform that hosts the campaign to enhance the innovation process (Graziano et al., 2023). Equity crowdfunding, by fostering the internationalization process of SMEs, can help to improve the firm's level of innovation, thanks to the relations and external resources that these companies can exploit through crowdfunding (Troise et al., 2023b). Despite this, the relationship between equity crowdfunding and innovation needs to be analyzed in more detail. According to Chan and Parhankangas (2017), crowdfunders judge crowdfunding projects by evaluating the level of incremental innovativeness (improvement of existing skills, technologies and knowledge) and radical innovativeness (drastic and unique innovation). The authors suggest that backers are more likely to finance campaigns characterized by incremental innovativeness rather than radical innovativeness. Innovativeness, from investors' point of view, can be defined as an overall assessment by which they judge projects in terms of their qualities of being new or innovative and how quickly an individual adopts new ideas relative to others. This concept differs from the entrepreneur's innovation concept, which refers to the tendency of the firm to increase its innovative capacity (Chan and Parhankangas, 2017). In fact, crowdfunding has proved to be a particularly suitable tool to promote innovation as it has financed many innovative projects (Rodriguez-Ricardo et al., 2018). Following Bargoni et al. (2022), crowdfunding, in particular equity crowdfunding, "represents a major tool to support long-term capital expenditures to support innovative projects that require time. Furthermore, equity crowdfunding is related to business model innovation and start-up creation."

Crowdfunding can foster the innovation process mainly in two ways: providing a new source of finance for innovative business ideas, and sharing ideas directly involving the crowd in the innovation process (Hervé and Schwienbacher, 2018). These two mechanisms are based on the concept that the crowd's wisdom can improve the investment decision-making process (Larrick et al., 2011). According to Drover et al. (2017), crowdfunding can contribute to the innovation process because it represents a reliable proxy of the demand for products or services that the creator of the crowdfunding campaign intends to accomplish, being backers' potential customers (Macht and Weatherston, 2014; Rodriguez-Ricardo et al., 2018). Nevertheless, equity crowdfunding can contribute to innovation by sharing ideas from the backers because these ideas represent crucial input for entrepreneurs (Di Pietro et al., 2018). The crowd can provide meaningful feedback to the entrepreneur who decides to launch a crowdfunding campaign, such as new ideas for product development or information on future demand for the product, increasing the innovative potential of the instrument

(Hervé and Schwienbacher, 2018). According to Popescul *et al.* (2020, p. 3), due to its intrinsic characteristics, crowdfunding can be considered a "genuinely disruptive technology, with a great potential to stimulate innovative projects."

Finally, crowdfunding is also able to support the innovation process through the dissemination of information. According to Hong *et al.* (2018), crowdfunding generates a word-of-mouth which increases the chance of success of a project. For this purpose, scholars demonstrated the role played by social networks in order to improve the information disclosure about the crowdfunding campaign (Butticè *et al.*, 2017; Troise *et al.*, 2020). In fact, crowdfunding can be an excellent example of collaborative innovation with disruptive potential. In this regard, according to Graziano *et al.* (2023), the amount of social connections of crowdfunding platform managers can influence the success of an equity crowdfunding campaign, favoring the dissemination of information.

2.2 Individual's level of innovativeness and the intention to finance a crowdfunding campaign

The literature on the determinants of crowdfunding campaign success is broad (Kaartemo, 2017; Shneor and Vik, 2020; Deng *et al.*, 2022). Despite this, limited attention has been paid to the perspective and motivations that drive investors to finance a crowdfunding campaign (Deng *et al.*, 2022), especially in the equity crowdfunding context (Caputo *et al.*, 2022). In order to deeply understand the critical drivers of crowdfunding campaign success, the backers' perspective is a crucial element that should be analyzed (Shneor and Munim, 2019).

Several reasons drive backers to join a crowdfunding campaign, such as help others, a sense of belonging to the community, rewards collection, financial returns, supporting entrepreneurs, improving the personal image and improving the network (Ordanini et al., 2011; Ryu and Kim, 2016; Bretschneider and Leimeister, 2017; Shneor and Munim, 2019). Following Cholakova and Clarysse (2015), the primary motivation that drives backers is financial reward; indeed, the non-financial reward plays a secondary role in the decision to pledge. Furthermore, Kang et al. (2016) analyzed the investment intention of backers on equity platforms, highlighting that trust affects willingness to invest. Zhao et al. (2017) found that backers' commitment to the project and the perceived risk positively affect funding intentions. In addition, Allon and Babich (2020, pp. 10–11) identified several motivations for investors to finance a crowdfunding campaign; the authors refer to "the perspective of financial profit, enjoyment of collaboration (with entrepreneurs or other funders), competition (for instance: gaining advantages for early contributions or access to oversubscribed investments), creation, contribution to a cause (supporting a community cause, such as environmental protection), consumption, charity, sense of belonging, and contract formalization (an official status for the agreement between the entrepreneur and investor)." Rodriguez-Ricardo et al. (2018) stressed the relevance of innovativeness and social identification within the crowdfunding community as drivers able to improve the chances of success of a crowdfunding campaign. Under the lens of social identity theory, the authors analyzed the relationship between attitude toward helping others, interpersonal connectivity and individuals' innovativeness, considering them as personal traits able to foster the backers' intention to finance (Tajfel et al., 1979). In particular, social identification in the crowdfunding community can mediate the relationship between interpersonal connectivity, attitude toward helping others and the investors' intention to finance a crowdfunding campaign.

Zhao et al. (2017) stated that what drives individuals are the perceived benefits that could affect their behavior and thus supporting a project. These perceived benefits include product and service innovation, aspects that the funded companies may achieve. According to the authors, the individuals' perception of innovation represents the sensation of novelty that a

product, service or experience can make people feel (Veryzer, 1998). Following Troise *et al.* (2022), the level of product innovativeness in equity crowdfunding campaigns influences potential backers. Usually, small innovative firms make the most comprehensive use of crowdfunding (Hervè and Schwienbacher, 2018). The reasons are identified in information asymmetry, making it more difficult for these companies to access financial resources from banks or other intermediaries. In fact, the ability to innovate cannot be offered as collateral in a bank or bond financing transaction. Nevertheless, the impossibility in generating positive cash flows in the early life of a company causes them to be unable to pay interest. Equity crowdfunding, having all the characteristics of equity, does not suffer from these problems, and the fact of being innovative, and therefore with high growth possibilities, is a feature that attracts investors with higher degrees of risk acceptance. Therefore, being innovative is a strength for those young firms. Moreover, backers are interested in the project success, and they are encouraged to provide suggestions to the entrepreneurs. Potential investors may be interested in supporting new business ventures, mainly if driven by the idea that these new initiatives will offer and develop new technological innovations and cutting-edge products.

Innovative investor behavior refers to the tendency of investors to finance innovative companies and/or ideas. The participants' individual level of creativity and innovativeness, and the desire to turn their business ideas into reality, may encourage individuals to support a crowdfunding campaign (Allon and Babich, 2020). Moreover, investors are eager to transfer their knowledge, skills and experience related to the project they decide to finance (Kim et al., 2020). To this purpose, Camilleri and Bresciani (2022) stated that "the diffusion of innovations theory suggests that there are five key elements that could influence the diffusion of a new idea (through crowdfunding platforms), including the innovation itself, adopters/users, communication/media channels, time, as well as social systems." In this perspective, entrepreneurs should develop and improve relationships with several categories of stakeholders during a crowdfunding campaign to enhance their chances of success. As underlined by Chan and Parhankangas (2017), backers judge the projects based on the degree of innovation they have; to do this, they may have an innovation-oriented behavior that helps them to judge this characteristic of the projects.

Investors' motivations to finance a crowdfunding campaign can be analyzed using a sociological and psychological approach due the impact of personal and social traits on the individuals' investment decision process (Pitschner and Pitschner-Finn, 2014). Individual innovativeness plays a crucial role among the social aspects, able to influence participation in crowdfunding activities. Following Rodriguez-Ricardo *et al.* (2018, p. 170), individual innovativeness is "the degree to which an individual adopts new ideas relatively earlier than the average member of his/her social system." The degree of innovativeness we are interested in is observable in the investor behavior. The innovative behavior of investors is similar to that of consumers because, in crowdfunding, the investor and the consumer often coincide (Macht and Weatherston, 2014). Innovativeness, in this case, can be defined as the force that enables innovative behavior (Roehrich, 2004).

Based on these considerations, we focused on individual levels of innovativeness as a personal trait that may affect the investment decision process. In the crowdfunding context, the relationship between the individuals' level of innovativeness and the intention to finance a campaign plays a crucial role because entrepreneurs, investors and consumers are part of a community in which they share not only ideas but also knowledge, feelings, encouragement and sympathy (Zhao *et al.*, 2017). The interaction between participants in this community contributes to creating social capital that fosters the intention to join the campaign and the project success (Colombo *et al.*, 2015). Furthermore, the individual innovative behavior, as a personal trait, shared within the community consisting of the entrepreneurs and backers of a crowdfunding campaign can have a positive impact on the improvement of the product/service, and thus be considered a crucial aspect that can influence the willingness to fund the

campaign, due to the high level of innovativeness that characterizes crowdfunding projects (Ordanini *et al.*, 2011; Rodriguez-Ricardo *et al.*, 2018). Based on the considerations above, we propose the following hypothesis:

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H1. The individual's level of innovativeness positively influences the individual's intention to finance a crowdfunding campaign.

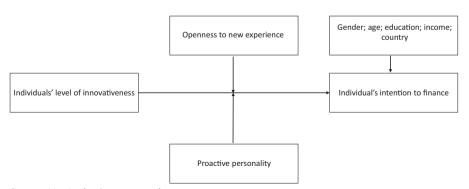
2.3 The moderator effect of investor's personality

The effect of the individual's level of innovativeness on the intention to finance a crowdfunding campaign may be influenced by psychological characteristics of the investor. People are not passive recipients of events around them, but they can influence, with their decisions, the context in which they live and work (McCrae, 1993; McCrae and Greenberg, 2014). People can intentionally change their current situation; this is the main characteristic of proactive behavior. An individual's proactivity is rooted in people's need to control and manipulate their life events (Langer and Abelson, 1983). Proactive people show initiative, take opportunities, act and persevere until they reach a specific goal they have set for themselves or even to solve a problem (Leavitt *et al.*, 1989). They feel the duty and need to impact the context in which they live positively. Non-proactive people exhibit opposite behaviors: they fail to identify and take advantage of the opportunities in front of them. They show little initiative and rely mainly on the actions and decisions made by other people. They passively adapt and even put up with their circumstances.

Individual proactivity is theoretically related to being outgoing, as both involve the need to have new experiences. It should also be related to personal consciousness, as both are goal-oriented and involve persistence in achieving it. Based on these considerations, we assume that:

H2. Proactive personality moderates the relationship between the individual's levels of innovativeness and the intention to finance a crowdfunding campaign.

Proactive behavior can also be related to openness to new experience, as both involve exploring something new, but openness also implies tolerance, which can be a sign of passivity and non-proactivity. Openness to new experience also appears to be more of a cognitive than a behavioral disposition (McCrae and Greenberg, 2014). Proactive and open people are more actively involved in the world around them, in professional pursuits that improve their interpersonal networks and potentially their careers, and in volunteer, charitable and related activities that strive to improve communities and the lives of others (see Figure 1).



Source(s): Author's own creation

Figure 1. Conceptual model

The openness personality has been shown to forecast individual innovation (Seibert et al., 2001) and more strategic proactive behaviors such as entrepreneurship (Crant, 1996). Some people think that certain behaviors are worthwhile because of the future benefits, even if the immediate outcome is reasonably undesirable. Others are more interested in maximizing immediate benefits than considering future consequences. Since proactive behavior implies anticipatory and future-focused action, individuals with a high level of consideration of future consequences should show proactivity in many domains. Based on these considerations, we assume that:

H3. Openness to experience moderates the relationship between the individual's levels of innovativeness and the intention to finance a crowdfunding campaign.

3. Sample and data measurements

3.1 Sample

We applied quantitative analysis to test the research hypotheses. In particular, a survey methodology was used following the previous studies in the field (e.g. Ciuchta et al., 2016; Mollick and Nanda, 2016; Cecere et al., 2017). The survey, based on 19 questions, was conducted through the Prolific web platform due to the possibility offered by the platform to apply a series of filters to target better potential respondents (Palan and Schitter, 2018). In particular, we chose participants located only in the US and the UK to avoid misunderstanding problems due to native languages other than English. The survey lasted 5 min on average, and we paid participants 1 euro (12 euros per hour) (Giachino et al., 2023).

Table 1 reports all the questions used in the survey to collect information about the variables used in the econometric model, based on the previous literature in the field (Wu *et al.*, 2014; Steigenberger, 2017; Hervé and Schwienbacher, 2018). All the questions included in the survey have been rated on a seven-point Likert-type scale, ranging from 1 to 7, where 1 means "completely disagree" ("not at all"), and 7 means "agree" ("a lot") (Fishbein and Ajzen, 2010; Cruz-González *et al.*, 2015; Santoro *et al.*, 2020). In addition, we invited some industry experts to review our questionnaire, modifying the questions based on their recommendations to improve the quality of the study.

The respondents were 385. Our sample is coherent with past studies in the field. To this purpose, Steigenberger (2017) analyzed the motivation of backers to contribute to reward-based crowdfunding projects using a sample of 228 respondents. Chen *et al.* (2019) used a sample of 350 respondents to study the determinants of both time and amount of donations in crowdfunding campaigns. Czarnitzki and Kraft (2009) stated that biased results can influence survey-based studies, primarily when the analysis is performed on different sectors. In this case, we consider the psychological aspects of bakers to understand the relationship between individuals' level of innovativeness and financial intention. As Santoro *et al.* (2021) suggested, such aspects mitigate the aforementioned bias. Furthermore, our survey questions refer to independent and dependent variables, and we used a single respondent.

The aforementioned technique may cause common method variance issues, as Lindell and Whitney (2001) stated. In order to mitigate this problem, following the literature in the field, we performed the following steps: (1) all questions used in the survey were based on the relevant literature in the field in order to facilitate a comparison with the results obtained by scholars in the past; (2) we avoided using particularly complex or ambiguous terms so as not to confuse the survey respondents; and (3) respondents were anonymous to encourage them to provide answers that are as truthful as possible (Lindell and Whitney, 2001; Santoro *et al.*, 2021). Furthermore, as stated by Siemsen *et al.* (2010), a correlation between measurement errors of independent and dependent variables does not create artificially significant moderation or interaction effects. Finally, following Santoro *et al.* (2021), we separated the

Variables	Items	References	Investment decisions in
Individual's intention to finance (IIF)	Given the chance, I intend to participate in crowdfunding projects	Rodriguez-Ricardo et al. (2018)	equity crowdfunding
	Given the chance, I predict that I would participate in a	Rodriguez-Ricardo	crowurunung
	crowdfunding project in the future	et al. (2018)	
	It is very likely that I will participate in a crowdfunding project in the near future	Rodriguez-Ricardo et al. (2018)	
Individual's level of	I like to experiment with new ways of doing things	Rodriguez-Ricardo	
innovativeness (ILI)	Time to dispersione with new mayo of doing uningo	et al. (2018)	
, ,	I like to fool around with new ideas even if they turn out	Rodriguez-Ricardo	
	to waste of time	et al. (2018)	
	I like to try new and different things	Rodriguez-Ricardo	
	T 1	et al. (2018)	
Openness to new	I am always open to new experiences	Gosling <i>et al.</i> (2003)	
experience (OE)	I am a very complex person I am very creative	Gosling <i>et al.</i> (2003) Gosling <i>et al.</i> (2003)	
	I am a very imaginative	Gosling <i>et al.</i> (2003)	
Proactive personality (PP)	No matter what the odds, if I believe in something I will	Bateman and Crant	
Troublive personancy (T7)	make it happen	(1993)	
	I love being a champion for my ideas, even against	Bateman and Crant	
	others' opposition	(1993)	
	I am excellent at identifying opportunities	Bateman and Crant	
	TCT1 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	(1993)	
	If I believe in an idea, no obstacle will prevent me from	Bateman and Crant	
Gender	making it happen Dummy variable (0 = man; 1 = woman)	(1993) Santoro <i>et al.</i> (2021)	
Age	Respondent's age	Santoro <i>et al.</i> (2021)	
Education	Respondent's age Respondent's education dummy (1 = bachelor's or	Santoro <i>et al.</i> (2021)	
Baadanon	master's degree; 0 = less than bachelor's degree)	Samoro er an (2021)	
Income	From 1 to five 5 based on different level of income	Giachino et al. (2023)	Table 1.
Country	Respondent's country dummy (1 = US; $0 = UK$)	, ,	Items and variables
Source(s): Author's own c	reation		measurements

questions within the questionnaire to reduce common method variance and bias. Due to the considerations mentioned before, our results can be considered reliable to test our research hypotheses.

3.2 Variables descriptions

The dependent variable of this study is the individual's intention to finance (IIF) an equity crowdfunding campaign. To measure the IIF of the participants, we relied on the study by Rodriguez-Ricardo *et al.* (2018). The items used to measure this variable are three, as reported in Table 1. Once the answers were collected, we carried out the confirmatory factor analysis (CFA) to confirm that the items used were able to reflect the conceptualization of our study. Furthermore, to confirm the reliability of the IIF variable, Cronbach's alpha was calculated, obtaining a result equal to 0.86 higher than the threshold 0.70 generally accepted in the literature (Bagozzi and Yi, 1988).

The independent variable of this study is the individuals' level of innovativeness (ILI). To measure this variable, we relied on the study by Rodriguez-Ricardo *et al.* (2018). The questions to identify the items are reported in Table 1. Also in this, the CFA was carried out which allowed to include all the items. Cronbach's alpha was found to be 0.89, making the variable reliable in model development.

In order to improve our econometric analysis, we test the impact of two moderator variables on the relationship between the individuals' level of innovativeness and the individual's intention to finance an equity crowdfunding campaign. In particular, we test the impact of proactive personality (*PP*) and openness to new experience (*OE*). *PP* is measured following the study of Bateman and Crant (1993) and using four items as reported in Table 1. The CFA made it possible to verify the validity of the construct as regards our study, and all four items were considered in the construction of the variable. Again, Cronbach's alpha was above 0.70 (0.92), making this measurement reliable. *OE* is measured following Gosling *et al.* (2003), using four items as reported in Table 1. The CFA confirmed also in this case the validity of the items. Furthermore, as regards reliability, Cronbach's alpha is equal to 0.90.

Following the literature in the field (e.g. Ciuchta *et al.*, 2016; Steigenberger, 2017; Santoro *et al.*, 2021), we employed a set of control variables in order to improve the robustness of our outcomes. In particular, we used the following control variables: gender, age, education, income and country. *Gender* is a dummy variable that takes a value equal to 1 if the respondent is a woman, and 0 if the respondent is a man. *Age* is the natural logarithm of the respondent's age. *Education* is a dummy variable that represents the respondent's level of education, and assumes a value equal to 1 if the respondent gained a bachelor's or master's degree, and 0 otherwise. *Income* represents the amount of respondents' monthly income and is based on a 7-point scale, ranging from 0 to more than 3,000 US dollars. Finally, *country* is a dummy variable that takes a value equal to 1 if the respondent lives in the United States, and 0 if the respondent lives in the United Kingdom.

Table 1 reports the description of all the variables used in the econometric analysis.

4. Results

4.1 Descriptive statistics

Table 2 shows the descriptive statistics of the variables considered in this study. In order to test the reliability of the data, we run the CFA and Cronbach's alpha test. Furthermore, the variance inflation factor (VIF) confirms the absence of multicollinearity issues among variables because VIF coefficients range from 1.64 to 2.12, below the threshold generally accepted in the literature (Myers, 1990). Finally, we tested the sample for its normality distribution using statistical tests (Kolmogorov–Smirnov). The test shows that residuals are normally distributed.

The dependent variable IIF has an average value of 3.214, with a standard deviation of 1.322. As regards ILI, the average value stands at 3.988, with a standard deviation of 1.421. Finally, the two moderating variables, PP and OE, have mean values of 4.442 and 4.284,

Variable	N	Mean	S.D.	Cronbach	VIF
IIF	385	3.214	1.322	0.86	1.74
ILI	385	3.988	1.421	0.89	1.64
OE	385	4.284	0.888	0.90	1.98
PP	385	4.442	1.188	0.92	2.09
Gender	385	0.361	0.477	/	1.98
Age	385	3.235	0.328	/	1.86
Education	385	0.273	0.488	/	2.12
Income	385	3.423	1.322	/	2.12
Country	385	0.165	0.374	/	1.78
Source(s): Auth	nor's own creation	Į.			

Table 2. Descriptive statistics

with standard deviations of 1.188 and 0.888, respectively. As regards the control variables, about 36.1% of the respondents are women. The average age is 3.235 (expressed as the natural logarithm). In addition, around 27.3% of respondents have a bachelor's or a master's degree. Furthermore, the respondents' average monthly income is 3.423 (expressed as the natural logarithm). Finally, about 16.5% of respondents live in the United States.

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Table 3 shows the polychoric correlation matrix. The coefficients are quite low as further confirmation of the absence of multicollinearity between variables. The highest value is 0.546, between ILI and PP.

4.2 Testing hypotheses

Source(s): Author's own creation

Table 4 reports the regression results. Model 1 is the basic model used to test the effect of the dependent variable ILI on IIF. Furthermore, models 2 and 3 have been performed to test the moderator effect of PP and OE variables on investors' intention to finance a crowdfunding campaign. In order to test the research hypotheses and following the literature in the field (Nirino *et al.*, 2021; Santoro *et al.*, 2021), an OLS regression model has been carried out. In addition, we run the Breusch-Pagan test to detect heteroscedasticity; hence, we implemented robust standard error equations to improve the reliability of our outcomes (Goncalves *et al.*, 2019; Albarrak *et al.*, 2020). The R-square varies from 0.218 in model 1 to 0.263 in model 2.

Variables	IIF	ILI	OE	PP	Gender	Age	Education	Income	Country
IIF	1								
ILI	0.299	1							
OE	0.248	0.412	1						
PP	0.432	0.546	0.512	1					
Gender	-0.025	-0.132	-0.084	-0.092	1				
Age	-0.099	-0.098	0.033	-0.045	0.075	1			
Education	-0.012	-0.010	-0.012	-0.081	-0.074	0.084	1		
Income	0.115	0.298	0.156	0.234	-0.159	0.182	0.198	1	
Country	-0.018	0.048	0.038	-0.048	-0.069	-0.055	0.045	0.299	1

Table 3. Correlation matrix

Variable	Model 1	Model 2	Model 3
ILI	0.323*** (0.064)	0.301*** (0.058)	0.298*** (0.079)
OE	` ,	0.168** (0.026)	,
PP		, ,	0.134** (0.048)
ILIxOE		0.115** (0.010)	, ,
ILIxPP			0.104** (0.034)
Gender	-0.050** (0.040)	-0.112**(0.031)	-0.098* (0.028)
Age	-0.188**(0.134)	-0.114* (0.172)	-0.148* (0.115)
Education	0.031** (0.008)	0.052* (0.022)	0.017* (0.031)
Income	0.297*** (0.112)	0.315*** (0.099)	0.314*** (0.100)
Country	-0.122(0.038)	-0.148(0.044)	-0.177(0.099)
Obs.	385	385	385
R^2	0.218	0.263	0.228
F value	15.35	16.12	16.45

Note(s): Statistical significance at the 1, 5 and 10% levels is indicated by ***, ** and *, respectively **Source(s):** Author's own creation

Table 4. Regression results

Model 1 shows a positive impact of ILI on IIF, with a coefficient equal to 0.323 (p < 0.01), confirming the H1, according to which the individual's level of innovativeness positively influences the individual's intention to finance a crowdfunding campaign. Furthermore, as is possible to note in models 2 and 3, the moderator effect of PP and OE positively affects the IIF. In particular, the coefficients are positive (0.134 and 0.168, respectively) and statistically significant (p < 0.05 in both cases). Furthermore, the interaction effect of PP and OE with ILI is positive (coefficients equal to 0.104 and 0.115, respectively) and statistically significant (p < 0.05 in both cases), as shown in models 2 and 3, confirming the research hypotheses 2 and 3. Finally, the impact of ILI on IIF remains positive (0.301 in model 2, and 0.298 in model 3) and statistically significant (p < 0.01 in both cases) even when the moderator variables and the interaction terms are included in the econometric models 2 and 3.

The control variables, gender, age, education and income, are statistically significant. In particular, education and income positively affect IIF, and gender and age negatively affect the dependent variable in all models. Education and income positively affect IIF, highlighting that individuals with higher education levels and income tend to invest more in crowdfunding projects due to their higher ability to understand the characteristics of this type of investment and having a more significant economic capacity. Age negatively affects IIF, showing that younger people are more likely to invest in crowdfunding projects. Finally, being a woman positively impacts IIF compared to being a man, as demonstrated by the control variable gender. The control variable country, instead, is statistically insignificant.

5. Discussion and conclusion

5.1 Theoretical contributions and practical implications

In this study, we investigated how individuals' characteristics affect the funding decision of backers in equity crowdfunding campaigns. Overall, many studies in this field analyzed the determinants of crowdfunding success focused on project and platform characteristics, but less attention has been given to backers' behavior. We analyzed this phenomenon through an investors' standpoint instead of using a managerial or financial perspective. Hence, based on a sample of 385 respondents of a survey, we empirically investigated how the individual's level of innovativeness influences the intention to finance an equity crowdfunding project. In addition, we examined if this relationship is strengthened when particular backers' personalities come to light that is, proactive personality and openness to new experience. Therefore, the results achieved contribute to crowdfunding theory in several ways.

Crowdfunding is a source of finance for new ventures that can also strengthen innovation. In particular, crowdfunding is able to foster the innovation process not only by providing financial resources to companies in the first phase of their life cycle but also by creating a community between entrepreneurs and investors within which ideas, skills and experiences are shared. Furthermore, crowdfunding creates positive word-of-mouth that can positively impact the success of a campaign. Equity crowdfunding is particularly suitable for startups and SMEs that can gain a competitive advantage from generating and exploiting innovation (Graziano et al., 2023). These aspects should be carefully considered when deciding whether to invest in a particular project. Despite some research considering crowdfunders more as consumers than investors (e.g. Chan and Parhankangas, 2017), our study focused on individuals who participate in equity crowdfunding campaigns, which have similar characteristics to those of more traditional equity investors. The emergence and the rapid growth of the crowdfunding phenomenon has changed the traditional investment scenario, especially for startups and SMEs. We built a conceptual model in which an individual's characteristics explain the intention to finance an equity crowdfunding project. Our findings demonstrate that individuals' investment decisions are affected by their attitude toward innovation. An investor who is able to perceive the degree of innovation of a project is more

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likely to invest. Individuals with a higher degree of innovativeness could be incentivized to finance an equity crowdfunding campaign, with the aim to be the first to use the firm's product/service.

Moreover, we suggested that personal traits linked to the individual's innovativeness have a role in influencing the individual's intention to finance. Proactive personality and openness to new experience moderate the relationship between the individual's level of innovativeness and the intention to finance crowdfunding campaigns. We support this result, suggesting that innovation is strength when backers have specific behaviors and psychological characteristics (Langer and Abelson, 1983; McCrae, 1993; McCrae and Greenberg, 2014). In fact, the study results show that individuals with a proactive personality and openness to new experience are more willing to invest when a project has a high degree of innovativeness. However, some might suggest that previous investment experiences may affect backers' decisions positively or negatively. Therefore, if a previous investment has had better returns than expected, the investor will be led to invest more efficiently. There is a limit in which the investor's euphoria and confidence, accumulated from previous success experiences, at some point, may prevail over all other considerations.

However, there is also a shortcoming. An investor must have innovation-prone behavior to ensure that very innovative projects are considered. Campaigns with more significant innovations can be more difficult for crowdfunders to understand, who avoid investing when they do not adequately understand the features and potential of the project. Chan and Parhankangas (2017) noted that crowdfunding is subject to the innovation maximization fallacy. This fallacy holds that scholars, entrepreneurs and crowdfunding platform operators may mistakenly believe that the more innovative a campaign is, the better it will perform. However, this assumption is not always accurate, as the success of a campaign depends on the type of innovation it represents, whether it is incremental or radical.

Based on these discussions, this study can help managers and practitioners understand the role of personal characteristics in the success of equity crowdfunding campaigns. The role of crowdfunding, and equity crowdfunding in particular, in supporting innovation is to provide funding for new business projects and involve consumers in the innovation process (Bargoni et al., 2022). Entrepreneurs and platform managers should pay particular attention to these aspects to maximize the potential of equity crowdfunding to stimulate innovation. Entrepreneurs may obtain superior outcomes, that is, financial resources, by considering the level of innovativeness of their project and the inputs coming from potential investors. According to our findings, entrepreneurs should pay special attention to the individual's level of innovativeness and specific personal traits such as proactive personality and openness to new experience when identifying consumers and potential investors creating an equity crowdfunding campaign. Furthermore, a focus on innovation can also help platforms in attracting innovative entrepreneurs and potential investors. To this purpose, platform managers with an active social network activity can stimulate the innovative production of SMEs and startups in the equity crowdfunding context (Graziano et al., 2023). One reason for this that investors are aiming for very high returns when they decide to invest in such projects. In fact, the innovation process is part of a firm's competitive advantage that allows firms to achieve higher returns than competitors creating shareholders' value. Therefore, the presence of such characteristics may attract more investors (Battisti et al., 2020), increasing the probability of campaign success.

Finally, we contribute to the entrepreneurship stream of research by analyzing the utility of the backers' perspective on the equity crowdfunding campaign success. Our evidence suggests that crowdfunding platforms and entrepreneurs should consider backers' attitudes and behavior carefully, considering the latter as a source of value creation for their projects. Entrepreneurs that apply for funds need to understand which backers they are targeting; moreover, it is plausible to assume that backers in specific contexts have psychological

characteristics that may be more pronounced than those in other countries. A better understanding of these aspects may help understand people's willingness to become crowdfunders, help entrepreneurs refine their products further and develop targeted communication strategies considering people's psychological characteristics.

5.2 Limitations and future research

Our study is not free from shortcomings, which may be the basis for interesting future studies. Like all survey and behavioral studies, it can be plagued by some participant bias. One of these is the backer's experience in investing in equity crowdfunding campaigns. Future studies should understand how this aspect affects the individual's intention to finance a crowdfunding project and if there are any cases of irrationality in the decisions of the backers. Furthermore, it would be interesting to analyze other aspects of personality besides the two treated in this study.

Our sample is based only on people residing in the UK and the US, with specific social and economic characteristics. Also, from a cultural point of view, they are different compared to oriental countries. Future studies could investigate this phenomenon by comparing countries to understand whether, and to what extent, there are differences related to the cultural aspects of entrepreneurs and backers that influence the chances of success of a crowdfunding campaign. Furthermore, the behavior patterns of citizens of different countries can also have different characteristics. Therefore, in future studies, it would be useful to understand how crowdfunding behaviors vary in different cultures. This would be important because it would allow suggestions on how and when to adopt equity crowdfunding, subject to other financing methodologies, based on the company's context and the potential investors they are targeting. Another aspect of interest would be to develop a longitudinal study to understand if and how the behaviors of the backers change over time.

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