

Understanding the Crowdfunding Phenomenon and its Implications for Sustainability

ABSTRACT

Nonetheless the large body of knowledge rapidly accumulated on crowdfunding as well as the growing relevance of this phenomenon for sustainability, there are very few studies on the role of crowdfunding for sustainability-oriented projects, and many related issues are still far from being fully understood. This signals a clear need for unveiling the main dynamics of the relationship between crowdfunding and sustainability, and also opening up useful directions for future research on this relationship. To conceptualise the implications of crowdfunding for sustainability, we propose and use a framework, encompassing five dimensions, namely the project creator, the backers, the campaign itself, the crowdfunding platform, the outcomes of crowdfunding campaigns. By interpreting and fine-tuning the findings emerging from the extant crowdfunding literature to the specific context of sustainability-oriented projects, we develop propositions that provide important implications for this type of initiatives. These implications can guide scholars in finding new paths of research on the topic, as well as provide practitioners with an instrument to better understand the relevance of the crowdfunding phenomenon for sustainable initiatives and make more informed decisions.

Keywords: sustainability-oriented crowdfunding; creators; backers; crowdfunding campaign; crowdfunding platform; crowdfunding outcomes.

1. INTRODUCTION

In less than a decade, the way of financing innovation and entrepreneurial initiatives has been dramatically shaped by the emergence of crowdfunding platforms, namely online platforms through which individuals and companies aim at funding their projects by means of open calls, in exchange for rewards, equity, other monetary benefits, or simply an acknowledgment (Belleflamme et al., 2014; Mollick, 2014). The crowdfunding phenomenon has surged so prominently that, according to the World Bank, crowdfunding investments are going to surpass traditional forms of new venture financing, such as venture capital (VC) investments, reaching \$90 billion by 2020 (Barnett, 2015; Greenhalgh, 2016; Scott-Briggs, 2017). These figures come along with the flourishing of a plethora of platforms, over 2,000 globally (Drake, 2016), adopting a variety of different crowdfunding mechanisms across many product/service categories.

The rapid growth characterising this phenomenon and its impressive impact on the economy has been generating an overwhelming interest also in the academia. A quick article search on Google Scholar shows that a researchers from different fields have started investigating the multi-faceted nature of this phenomenon. As a matter of fact, before 2009, when Kickstarter (one of the major crowdfunding platforms worldwide) was launched, the term crowdfunding resulted in 425 occurrences on Google Scholar, whereas after nine years it has jumped up to more than 40,000 occurrences. In turn, these figures suggest that, in spite of the recent surge, the body of knowledge on the crowdfunding phenomenon already accumulated in the literature is numerically significant. In addition, the inter-disciplinary nature of the search results reveals that the crowdfunding phenomenon has been studied from different perspectives and by means of diverse research methodologies (e.g., Mollick, 2014; Burtch et al., 2015; Drover et al., 2017; Roma et al., 2017; Stanko and Henard, 2017).

Furthermore, crowdfunding has received a significant interest also in light of the financial support it may provide to initiatives focusing on sustainability issues (infoDev, 2013), such as projects aimed at developing environmentally-friendly solutions and pursuing environmental goals. These initiatives are generally considered by professional investors (e.g., venture capitalists) as less attractive investments than traditional entrepreneurial ventures, due to their higher interest towards social and environmental goals rather than towards economic returns, their higher intrinsic difficulty to provide tangible and measurable outputs in the short term, and the consequent higher market uncertainty (Choi and Gray, 2008; Hörisch, 2015; Calic and Mosakowski, 2016). It is recognised that the lack of funding from professional investors determines a central obstacle to the development of this type of projects (Ortas et al., 2013), therefore, crowdfunding may play a pivotal role especially for sustainability-oriented initiatives. Indeed, crowd contributors, i.e., backers, often

have very different motivations to fund projects from those of professional investors, since they are mainly moved by altruistic or normative reasons that make them willing to support social and environmental causes, or by the variety of attractive rewards they can receive (e.g., Lindenberg and Steg, 2007; Lehner, 2013; Belleflamme et al., 2014; Lehner and Nicholls, 2014; Roma et al., 2017). In spite of the large body of knowledge rapidly accumulated on crowdfunding as well as the growing relevance of this phenomenon for sustainability issues, studies on the role of crowdfunding in supporting sustainability-oriented initiatives are still very rare (e.g., Hörisch, 2015; Calic and Mosakowski, 2016; Vasileiadou et al., 2016). Hence, many issues on this matter, such as how creators should design and manage this type of campaigns in order to secure funding, or whether crowdfunding can trigger people's awareness about sustainability issues and thus increase the likelihood of success of these initiatives, are still far from being satisfactorily addressed and even understood. This suggests a clear need for unveiling the main dynamics of the relationship between crowdfunding and sustainability, and also for opening up useful directions for future research on this relationship. Therefore, we develop a conceptual paper that grounds on the major contributions available in the general crowdfunding literature in the attempt to interpret and fine-tune the emerging findings to the specific context of sustainability-oriented projects, and thus provide important implications for this type of initiatives by formulating a number of propositions. These propositions and the related implications are organised under a framework consisting of five key dimensions, namely the project creator (i.e., individual launching a crowdfunding campaign), the backers (i.e., contributors of the campaign), the campaign itself, the crowdfunding platform (i.e., the intermediary online platform where the campaign is launched), the outcomes of crowdfunding (i.e., the financial, economic, and social consequences of crowdfunding campaigns). In our view, due to its simplicity, this framework is particularly suitable to the purpose of the study since the dimensions considered are central to the crowdfunding process (Lam and Law, 2016) and thus can be easily understood by researchers across multiple disciplines, as well as crowdfunding practitioners.

The remainder of the paper is organised as follows. In Section 2, we first explore into greater detail the crowdfunding phenomenon discussing its main aspects, as well as the role of the involved actors, and then introduce the mentioned framework. In Section 3, we draw implications for sustainability-oriented initiatives using crowdfunding, developing propositions that can guide future research directions. Finally, in Section 4 we conclude the study by highlighting its main contributions.

2. CROWDFUNDING: THEORETICAL BACKGROUND AND RESEARCH FRAMEWORK

2.1 Background

Crowdfunding has been defined as “a collective effort by individuals who network and pool their money together, usually via the Internet, to invest in or support the efforts of others” (Ordanini et al. 2011). Specifically, by leveraging crowdfunding, individuals, organisations, and firms undertaking a particular project can solicit funding from other individuals (i.e., the crowd) often in exchange for future rewards, equities or other forms of returns (Belleflamme et al., 2014; Mollick, 2014; Bruton et al., 2015). A variety of projects can be funded by crowdfunding, ranging from entrepreneurial to cultural or social projects, which may naturally differ in scope and size (Roma et al., 2017).

Literature has identified five different forms of crowdfunding, namely donation-based, reward-based, lending-based, royalty-based, equity-based (Belleflamme and Lambert, 2016). In the donation-based model, contributors financially support projects without any promise of receiving anything in return. In the reward-based model, contributors are entitled to a non-financial reward, which is commensurate to the level of funding and very often consists of the product/service that the project creator aims to commercialise. In the lending-based model, contributors essentially lend their money to the project creator at a certain interest rate. In the equity-based model, contributors finance the project in exchange for a share of equity securities. Because of the complex legal issues involved under this form of crowdfunding, contributors are usually professional and accredited investors, such as business angels and VCs. Finally, in the royalty-based model, contributors receive a portion of the future revenue the given project will generate, in the form of royalties. Actually, the interest of scholars towards crowdfunding differs across these forms. A search¹ in the Scopus database showed that, up to May 2018, a majority of academic articles has explicitly focused on equity-based crowdfunding (99 articles), followed by reward-based (68), donation-based (45), and lending-based (42) crowdfunding. Finally, only 2 articles have investigated royalty-based crowdfunding. In terms of economic importance, according to the most recent available data, lending-based crowdfunding was the most relevant crowdfunding form, collecting a global volume of funds corresponding to about \$25 billion in 2015. Donation-based, reward-based and equity-based figures are sensitively lower with, respectively, a global volume of \$2.85 billion, \$2.68 billion, and \$2.56 billion collected. Finally, royalty-based crowdfunding raised about \$400 million in funds (Massolution, 2016).

¹ Specifically, we restricted our search to article title, abstract, and keywords, in order to search for those papers that explicitly deal with different forms of crowdfunding.

While many of the financing models above were adopted also before the Internet era, it is undeniable that Internet-based platforms played a crucial role in the rise of the crowdfunding phenomenon as fundraising activities are no longer confined to the geographical area where the project creator operates, but become worldwide available to any individual able to access a crowdfunding platform (Mollick, 2014; Agrawal et al., 2015). In this respect, crowdfunding supports the democratisation of entrepreneurship and the access to entrepreneurial finance (Aldrich, 2014; Kim and Hann, 2015). However, crowdfunding does not only have a financial function for entrepreneurs and other project creators. Indeed, some forms of crowdfunding (i.e., reward-based crowdfunding) can work as a marketing tool in three ways. First, they can serve as a pre-ordering (or advance-selling) mechanism that will stimulate sales in early stages of new product development (Hu et al., 2015; Brown et al., 2017). Second, they can serve as a marketing research tool. Actually, by relying on individuals who express their preferences by committing their own money in risky projects, crowdfunding campaigns can inform project creators and professional investors about the market potential of the new proposed product ideas, thus diminishing the market uncertainty traditionally surrounding new projects (Agrawal et al., 2015; Drover et al., 2017; Roma et al., 2017, 2018; Stanko and Henard, 2017; Viotto da Cruz, 2018). Finally, by enabling the dynamic interaction between project creators and backers also after the campaign, crowdfunding can also work as a mechanism to allow and engage customers to participate in the creative process of new product development and thus improving the match between product features and customers' needs (Belleflamme et al., 2014; Brown et al., 2017; Galuszka and Brzozowska, 2017; Stanko and Henard, 2017).

2.2 The crowdfunding process

From an operational viewpoint, the crowdfunding process typically involves the project creator, the crowdfunding platform, and the backers. Any individual, organisation or firm necessitating financial resources to develop a new product or service, can start a fundraising campaign by using one of the many crowdfunding platforms available worldwide. To launch a campaign, a project creator must adhere to certain rules, which concern campaign design, funding rules, and legal issues, that may vary depending on the type of crowdfunding platform (Belleflamme et al., 2014; Mollick, 2014; kickstarter.com). To verify whether a given project satisfies the specific rules, platforms set up a project review process before approving the campaign launch. A common feature across the majority of platforms is that, before launching the crowdfunding campaign, project creators have to set the goal, i.e., the targeted amount of money that they aim to collect. They are also required to thoroughly present their project to the potential contributors (the crowd) by

providing accurate and truthful information about the project and its output, the people or organisation behind the project, and the risks associated with the execution of the project (e.g., www.kickstarter.com, www.crowdcube.com). Furthermore, these details are usually provided in the form of texts, images and/or videos. Information provision is generally perceived as very important for the success of a crowdfunding campaign, and it is indeed largely stressed by platforms as a crucial requirement (Ahlers et al., 2015; www.kickstarter.com). In fact, from the perspective of backers, funding a project is a risky investment since these initiatives are related to innovations, which by nature are fraught with high technical and market uncertainty (Roma et al., 2017).

Depending on the type of crowdfunding platform, project creators are also required to set up *ex-ante* a scheme of benefits to offer to backers, based on the level of funding they provide. For instance, in reward-based crowdfunding (e.g., www.kickstarter.com), each project creator needs to define several rewards, which usually range from a simple “thank you” e-mail in exchange for \$5 or \$10 support, to customised versions of the product/service that the project creator intends to commercialise in exchange for much higher contributions (depending on the value of the product/service). Differently, in the equity-based model (e.g., www.crowdcube.com), creators are typically required to define the minimum investment amount and how much equity the company offers in exchange for funding. The launch date and duration of the campaign are additional important decisions project creators are required to make. After the campaign is launched, backers can decide whether and how much to contribute based on their interest in the project. Crowdfunding platforms often offer creators and backers the opportunity to interact during and after the campaign through project updates from creators and backers’ comments (Mollick, 2014). During the campaign, backers’ contributions are usually withheld by the platform, which will transfer them to the project creator at the end of the campaign, depending on the mechanism adopted by the platform (Cumming et al., 2014; Roma et al., 2017). Specifically, for platforms using the all-or-nothing mechanism, the entire amount of money accumulated at the end of the campaign will be transferred to the project creator (after subtracting a fee to ensure platform profitability), only if such amount equalises or exceeds the goal set. By contrast, for platforms using the keep-it-all mechanism, the entire contributions will be transferred to the project creator (after subtracting a fee to ensure platform profitability) irrespective whether the goal has been reached or not. In reward-based crowdfunding platform, after the campaign, if the money has been transferred, the creator has the obligation to complete the project and thus fulfil each reward. However, given the uncertainty underlying the innovation process, reward-based crowdfunding platforms themselves warn backers that some projects may not go as planned, in which case project creators must meet their obligations by demonstrating how funds were used and, at the same time, offering some refunds or explaining

how they will complete the project in some alternative forms (e.g., www.kickstarter.com). In the equity-based crowdfunding, investors become shareholders and thus naturally bear the risk intrinsically entailed in the entrepreneurial initiative.

2.3 A five-dimension framework to investigate the crowdfunding phenomenon

To conceptualize the implications for sustainable-oriented ventures on the basis of findings available in the extant crowdfunding literature and formulate propositions, we use a framework consisting of five dimensions (Figure 1), namely the *project creator*, the *backers*, the *crowdfunding platform*, the *campaign* itself, and the *crowdfunding outcomes* (i.e., the economic, financial and social consequences of crowdfunding campaigns).

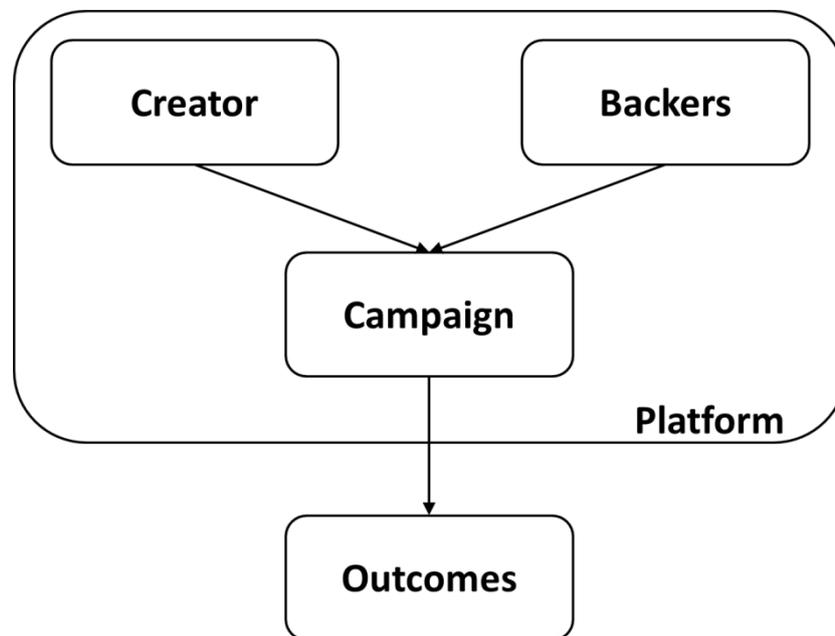


Figure 1. The five-dimension framework to analyse the crowdfunding phenomenon.

In our view, these dimensions are the most intuitive to understand the crowdfunding phenomenon as they refer to its essential elements, namely the actors involved, the crowdfunding process itself, and the outcomes of crowdfunding. Indeed, these dimensions are recurrently central in most of studies examining the crowdfunding phenomenon, and even in the multiple declinations of its definition. Actually, our five dimensions have been the fulcrums around which the crowdfunding literature has developed. For instance, in their seminal study, Ordanini et al. (2011) identified the three typologies of actors that operate in crowdfunding, namely: the project creators, the backers that may support crowdfunding projects, and the crowdfunding organisations hosting the campaigns on their platforms. Along with the main actors of the process, we include a dimension referring to the process itself, i.e., the crowdfunding campaign, according to several previous studies (e.g.,

Belleflamme et al., 2014; Mollick, 2014; Cumming et al., 2017; Roma et al., 2018). Finally, we add in the framework a dimension referring to the results of the campaigns, i.e., the crowdfunding outcomes, which takes into account campaigns' subsequent direct and indirect effects (e.g., Belleflamme et al., 2014; Cumming and Zhang, 2016; Langley, 2016; Wright et al., 2016; Drover et al., 2017; Roma et al., 2017), hence providing a comprehensive view of the whole phenomenon. As previously discussed, these five dimensions are the minimum elements to describe the crowdfunding process, nonetheless they are sufficient for an effective analysis of the process itself. First, crowdfunding requires the presence of a *project creator*, who has an innovative idea to develop and needs funding for it. The importance of this dimension is underscored by the presence of numerous studies examining how the characteristics of the creators and their projects influence the crowdfunding campaign success (Mollick, 2014; Ahlers et al., 2015; Colombo et al., 2015). Second, crowdfunding also requires the presence of individuals and/or professionals, *the backers*, willing to fund the projects because they like the product/service to be commercialised, or because they want to make some potentially profitable investments, or simply because of altruistic reasons. The behaviour and the characteristics of backers have been examined by initial contributions, with a main focus on understanding the motivation, the dynamics, and the incentives underlying their participation to crowdfunding campaigns (Ordanini et al., 2011; Burtch et al., 2013; Agrawal et al., 2015; Burtch et al., 2015; Cholakova and Clarysse, 2015; Kuppuswamy and Bayus, 2017). Third, the rise of the crowdfunding phenomenon has been undoubtedly favoured by the Internet, since online *crowdfunding platforms* are the vehicle through which the financing of new projects can occur worldwide. The crucial role of platforms in the development of crowdfunding has been highlighted by numerous studies investigating a number of related issues, such as the choice of the form of crowdfunding to implement (Belleflamme et al., 2014), the choice of funding mechanisms to adopt (e.g., all-or-nothing versus keep-it-all) (Cumming et al., 2014), or the choices related to the project screening and selection process (Belleflamme et al., 2015; Burtch et al., 2015). Fourth, the *campaign* is the core of crowdfunding because it involves all the strategic and operational decisions of the actors: project creators have to design and manage the campaign under multiple aspects (goal, scheme of benefits, project information, videos, interaction with backers); backers have to decide which projects are worth to fund, how much to fund, monitor the campaign and follow-up with the project creator after the campaign; and, the platform owners need to technically and procedurally design and manage the campaign and ensure that the whole process occurs satisfactorily. The importance of this dimension is also emphasized by the fact that crowdfunding has been largely studied with regard to issues related to the design and management of the campaign and how the characteristics of the campaign influences the likelihood of success (Mollick, 2014; Hu et al.,

2015; Yuan et al., 2016; Block et al., 2017; Cumming et al., 2017). Finally, *the crowdfunding outcomes* refer to the consequences of crowdfunding campaigns with regard to the project creator's ability to actually develop the product/service and successfully commercialise it in the market, and, more general, to the potentially disruptive impact of crowdfunding on the financial system as well as on the society. While the other identified dimensions are central to the crowdfunding phenomenon as they help capture the actors, their roles, their decisions and the processes behind crowdfunding, the last dimension is also central because it allows capturing the role of crowdfunding campaigns as an effective mean to contribute to the development of entrepreneurship (Cumming and Zhang, 2016). Indeed, the choice of this dimension is driven by the observation that a nascent stream of crowdfunding literature has started examining the consequences of crowdfunding campaigns (which we refer to as crowdfunding outcomes) in terms of economic performance of crowdfunded projects or their ability to survive in the market (Stanko and Henard, 2017) and, more broadly, in terms of the impact of crowdfunding on the landscapes of entrepreneurship, entrepreneurial finance, and society as a whole (Cumming and Zhang, 2016; Langley, 2016; Wright et al., 2016; Drover et al., 2017; Roma et al., 2017). By virtue of referring to the essential elements of the crowdfunding phenomenon investigated by the extant literature, the proposed framework is the simplest way to categorise the relevant findings in this field. More importantly, the simplicity and comprehensiveness of our framework is particularly suitable to the purpose of deriving useful implications on the role of crowdfunding for sustainability-oriented projects, given the embryonic stage of the research on this matter. In the following, we discuss the extant theoretical understanding about the five dimensions identified in our framework, preparatory to conceptualize the implications for sustainability-oriented crowdfunding projects.

2.3.1 Creators of the campaign

The creators of the crowdfunding campaign have been the subject of several studies. Most of the academic literature has been dealing with how the creators may increase the likelihood of being funded and achieve their funding objectives. In particular, the interaction with the community of backers has been regarded as paramount to successfully complete a crowdfunding campaign. Indeed, being an active creator and providing updates on the advancement and on the schedule of the project increases the likelihood of campaign success (Hobbs et al., 2016; Cho and Kim, 2017). At the same time, crowdfunding pitch quality and updates are evidence of both creators' passion and expertise, which help increase backer trust and confidence (Hobbs et al., 2016), as well as favour backers' perception of projects' quality and innovativeness (Davis et al., 2017). In particular,

social entrepreneurs are better rewarded when using concrete and precise linguistic styles, supporting the creation of a personal connection with the community, thus making the community familiar with the campaign (Parhankangas and Renko, 2017). However, the creators should be aware that the community of backers and people interested in the campaign might be highly heterogeneous (Ryu and Kim, 2016). Therefore, the creators should be careful in providing updates to leverage the different motivations to fund that different typologies of backers may have (Ryu and Kim, 2016). In fact, in some cases, providing extremely detailed information about the campaign, as for instance about how the creators wish to use the funds received, may be detrimental for the likelihood of success (Cho and Kim, 2017).

Effectively building and nourishing a community of people interested in the project may start from the social network of the creator. Actually, it is widely accepted that the social capital of the creators has a positive influence on achieving the success of the crowdfunding campaign (Mollick, 2014; Zheng et al., 2014; Colombo et al., 2015; Liao et al., 2015; Davidson and Poor, 2016; Hobbs et al., 2016; Kromidha and Robson, 2016; Mendes-da-Silva et al., 2016; Vismara, 2016; Kunz et al., 2017). The social capital is even more important when the creators do not use a third-party crowdfunding platform, but decide to launch self-hosted campaigns, i.e., campaigns in their websites (Gleasure and Morgan, 2017). Specifically, previous studies found that the larger the creator's social capital, the higher the pledge to backer ratio (Kromidha and Robson, 2016), and, moreover, the higher the number and the value of the pledges received for the campaign (Mendes-da-Silva et al., 2016). The personal social network of the creator is the basis to create a community of backers (Colombo et al., 2015). Additionally, previous research has also demonstrated that the benefits of creators' social capital are amplified by their cultural and symbolic capital, which favours the recognition and exploitation of entrepreneurial opportunities (Lehner, 2014). The creators should assume an active role in expanding their social network and building a lively community of backers by setting up an appropriate environment that favours the interaction with and among the backers, hence providing them with benefits from their participation in the community (Belleflamme et al., 2014; Galuszka and Brzozowska, 2017). To stimulate backers and make them more active, the creators should be aware of the fact that crowdfunding platforms are communities where people, though heterogeneous, share similar values and sense of belonging and thus may be disappointed when creators' moves contradict the basic principles of the community (Gleasure and Feller, 2016a). The positive effects of creating an active community of backers does not affect only the funding performance of the campaign, but it also favours the provision of feedback and suggestions to the creators that, in turn, may be helpful to increase the quality of the projects and make them more appealing to the potential funders (Smith, 2015; Galuszka and

Brzozwska, 2017). Indeed, this is one of the reasons that make crowdfunding more profitable than traditional funding mechanisms (Belleflamme et al., 2014). Finally, in exploring the relationships between project creators and backers, some authors have taken a more nuanced view by showing how certain types of homophily may favour female entrepreneurs, especially in industries where they are underrepresented (Greenberg and Mollick, 2017). Moreover, female entrepreneurs may be perceived as more trustworthy respect to male entrepreneurs by backers that, consequently, may be more willing to fund women-led campaigns (Johnson et al., 2018).

2.3.2 Backers of the campaign

The interest of backers is, of course, crucial for the success of the crowdfunding campaign. In particular, the backers participate and fund a campaign in order to receive material or financial benefits (Gleasure and Feller, 2016b), as well as when they believe that their contribution will make an actual impact for the project success (Kuppuswamy and Bayus, 2017). Additionally, they may also fund a campaign in order to provide social benefits to a specific community or individuals, as in the case of donation-based crowdfunding campaigns (Gleasure and Feller, 2016b). So far, the attention of scholars has focused on the characteristics of backers that affect the likelihood of success of a campaign and on their behaviour. One of the most analysed and debated characteristics of backers is their geographical distance from the creator of a crowdfunding campaign. Indeed, the geographical distance positively impacts on the likelihood of success of a campaign, since the creators may leverage the social networks of distant backers to increase the diffusion of the campaign and call for more funds (Kang et al., 2017). Nonetheless, reaching geographically distant backers does not come without costs. In fact, some studies found that backers prefer to support the campaigns of geographically proximate creators (Burtch et al., 2014; Lin and Viswanathan, 2016) and, additionally, distant backers are less disposed to invest large sums in a crowdfunding campaign than proximate backers (Mendes-da-Silva et al., 2016). Along with the geographical distance, also cultural distance affects the amount of funding provided by backers. In fact, as the cultural distance between backers and creators increases, the propensity to fund a campaign diminishes (Burtch et al., 2014). Furthermore, this effect is substitutable with that of geographical distance (Burtch et al., 2014). Conversely, the geographical distance between creators and backers is complementary to the effect of backers' social capital with respect to the likelihood of success of a campaign (Kang et al., 2017). The rationale is that in both cases the social networks of backers are leveraged to increase the reach of the campaign, echoing and amplifying the paramount importance of creators' social networks. For this reason, having the endorsement of backers is necessary to involve and leverage them to promote the campaign. Therefore, backers that identify themselves with the values

promoted by the campaign participate more actively and may thus increase the likelihood of success of the crowdfunding initiative (Kromidha and Robson, 2016; Cumming et al., 2017). Similarly, backers that deem the campaign as attractive are also more likely to fund it and being active in diffusing it to the members of their social network, with a positive influence on the campaign itself (Zhao et al., 2017). These typologies of backers play also a crucial role in interacting with the creators and in keeping the community alive, hence resulting in an increased amount of funds collected by the creators (Kromidha and Robson, 2016; Zhao et al., 2017). A continuous interaction with the creators and the sharing of common values may increase backers' perception of trust towards creators, with positive impact on the propensity to fund (Zhao et al. 2017). Indeed, some authors emphasised that crowdfunding communities are not only driven by economic motivations, but also by a set of shared values, trust, and common identities that unite backers to specific projects and creators (Booth, 2015; Hills, 2015; Gleasure and Feller, 2016a).

2.3.3 Campaign

The research on crowdfunding campaigns has mainly focused on two topics, namely how to properly outline a project to attract funds and which endogenous and exogenous factors may affect the success of the campaign.

Of course, the description of a project is paramount to attract the interest of backers and, therefore, funds to successfully complete the campaign. As a result, much work has been done on analysing campaigns' descriptions in order to predict the fundraising outcomes of these projects and some techniques to perform these analyses were proposed (Yuan et al., 2016). In general, the features of project's description (e.g., length, readability, presentation, video, and tone), the related rhetorical techniques (*ethos*, *pathos*, and *logos*) and the project's trustworthiness (past experience and past expertise) have been shown to positively influence the funding success (Tirdatov, 2014; Hobbs et al., 2016; Zhou et al., 2016; Bi et al., 2017; Kunz et al., 2017).

Along with the description of the project, other features of the crowdfunding campaign may contribute to its success. In particular, the definition of the campaign goal and duration, the capability to timely deliver rewards to backers, and the distribution of pledges may be particularly impactful with respect to the likelihood of campaign success (Mollick, 2014). First, reducing the financing goal as well as the campaign duration may help creators in being successful in crowdfunding (Kunz et al., 2017; Zhang et al., 2017). Furthermore, achieving and going beyond the goal may also signal that the creator has an active fans community and, thus, promote the launch of subsequent crowdfunding campaigns (Davidson and Poor, 2016). However, in some cases, even if the campaign does not reach its goal, a good response by backers may signal market interest

towards the project, hence the entrepreneur may be pushed to further develop the idea and market it (Viotto da Cruz, 2018). Concerning the pledges, previous studies have pointed out that reducing the minimum pledge increases the odds of the campaign to be funded, since it may attract a higher number of backers (Zhang et al., 2017). At any rate, this should not be a big concern for the creators, since, as the crowdfunding campaign progresses, the pledges tend to increase in value and, hence, may favour the achievement of the financing goals (Mendes-da-Silva et al., 2016).

Interestingly, the definition of pledges may be affected by backers' heterogeneity in terms of preferences and willingness to contribute. Indeed, the creators aiming at maximising the likelihood of reaching financing goals may decide to increase the offer of products, for instance by adding additional features, and, consequently, practising price discrimination through an increase of the number of pledges (Hu et al., 2015; Kunz et al., 2017).

A further important decision regarding the crowdfunding campaign is the choice between rewarding the pledges with the product to be developed or other consumer gadgets (i.e., reward-based or, equivalently, pre-ordering scheme) or with a share of the potential profits (i.e., profit-sharing or equity-based scheme). This depends on the amount of funding needed and the size of the market. In case the funding needed is low and/or the market is large, creators should opt for pre-ordering schemes; otherwise, when funding needed is high and/or the market is narrow, profit-sharing schemes are more advisable (Belleflamme et al., 2014). In addition, when considering equity crowdfunding, campaigns selling larger portions of the company/business at listing are less likely to attract the interest of potential investors (Vismara, 2016). Moreover, scholars have suggested that the choice of the crowdfunding model depends on the stage of the project. Indeed, the donation or reward-based mechanisms are more appropriate in the pre-startup stage, while lending and equity forms are more effective when the project is in the startup or growth phase (Paschen, 2017).

Exogenous factors, such as the environmental conditions, may also affect the likelihood of the campaign to be funded. For instance, scholars have noticed that a rise in the crude oil prices, in turn, increases the number of cleantech campaigns and their likelihood of success (Cumming et al., 2017).

A specific category of campaigns refers to the non-commercial or non-profit one, involving a monetary transaction that is motivated neither by the expectation of a financial return nor by charity. In these cases, a symbolic reward such as public acknowledgment of the donor acts as an incentive for backers, but only when no material rewards are offered (Bœuf et al., 2014). These non-profit campaigns are significantly more likely to reach their minimum goals and receive more money from a single backer on average (Pitschner and Pitschner-Finn, 2014). Nevertheless, these campaigns have fewer backers and therefore obtain lower total funding amounts than commercial

campaigns (Pitschner and Pitschner-Finn, 2014). Similarly to non-commercial campaigns, also environmental and, more in general, sustainability-oriented projects are largely popular on crowdfunding platforms, as sustainability-oriented issues well match the logic and principles of communities that typically characterise crowdfunding. However, in spite of their growing relevance, very few studies have investigated this type of crowdfunding initiatives and results are quite contrasting. For instance, some studies found that sustainable initiatives are more likely to succeed in crowdfunding than those that do not explicitly promote sustainable goals (Calic and Mosakowski, 2016), whereas others have suggested sustainability-oriented projects do not present a significant advantage in terms of crowdfunding success, but rather even a disadvantage (Hörisch, 2015). Nonetheless, the likelihood of successfully complete a crowdfunding campaign is higher for those sustainable projects that do not aim at high levels of market impact and growth (Hörisch, 2018).

2.3.4 Platform hosting the campaign

Online platforms are crucial for the success of crowdfunding campaigns. Indeed, platforms allow to overcome the constraints of the geographical distance and facilitate the interaction between creators and potential backers (Galuszka and Brzozowska, 2017; Kang et al., 2017). Moreover, platforms may support creators in diffusing their campaigns in different geographical areas, exploiting the social network and the referrals of backers, thus increasing the odds of successfully complete a campaign (Kang et al., 2017).

Nevertheless, in order to be effective, platforms are called to face some challenges, which government support and regulation can help overcome. Specifically, crowdfunding is a quite new phenomenon and in some regions there is, still, the lack of a clear regulatory framework that can provide more favourable conditions for crowdfunding to develop (Vasileiadou et al., 2016). Along with this view, the support of local associations and supervising institutional bodies may increase the interest of entrepreneurs towards this new form of financing and promote the growth of platforms (Vasileiadou et al., 2016). One of the reasons that explain the importance of the institutional support is that this may increase the trust of potential creators and backers towards the platforms (Burtch et al., 2014).

A further challenge that a platform needs to cope with is the selection of crowdfunding campaigns to be promoted through the platform. In fact, increasing the number of projects promoted on the platform decreases the likelihood of attracting funds, since these are spread across several different projects (Corazzini et al., 2015). However, this effect could be mitigated by the presence of low-quality projects. Indeed, it is possible that in the presence of low-quality projects, the high-quality

ones get more relevance, thus their probability of being funded increases (Parker, 2014). A solution to this conundrum is to select the best projects and advise them on the homepage, in order to support backers in identifying the most promising initiatives (Corazzini et al., 2015). In addition, when selecting crowdfunding campaigns, platforms face a number of decisions that influence the platform's ability to attract high quality projects and backers willing to contribute, thus in turn affecting the platform's ability to activate a virtuous cycle of growth. For instance, some authors highlighted that opting for less stringent screening process may not be a wise decision as the increase in the number of projects launched in the platform creates fiercer competition among project creators with lower success rates and less incentive to invest in the reduction of information asymmetries suffered by the backers (Wessel et al., 2017). In turn, this may further discourage backers from supporting projects. This implies that platforms need to carefully choose the most appropriate level of openness in their screening processes to successfully nurture their ecosystem. Finally, platforms have to decide the crowdfunding model (reward-based, donation-based, equity-based, revenue-sharing-based) and the funding mechanism (all-or-nothing or keep-it-all) to adopt. As this choice influences the mass of project creators that will use a given platform, platform owners should be cognizant of the circumstances under which a certain crowdfunding model is more preferable.

2.3.5 Crowdfunding outcomes

The results of crowdfunding campaigns may be analysed in terms of financial, social, and economic outcomes, thus highlighting the role of this emerging phenomenon at the whole ecosystem level (Quero et al., 2017). Indeed, from a financial perspective, crowdfunding may replicate, rather than disrupt, the extant institutional and debt dynamics of funding practices (Wright et al., 2016; Langley and Leyshon, 2017). It increases competition and democratisation in financial services, increases the availability of funding for pro-social projects, and contributes to the erosion of organisations' financial boundaries (Cumming and Zhang, 2016; Gleasure and Feller, 2016b). In particular, some studies have revealed that the changing composition of the crowdfunding economy reflects the ongoing process towards the marketisation of finance (Langley, 2016). For financial purposes, crowdfunding can also serve as a vehicle for attracting subsequent funding from professional investors (Drover et al., 2017) by offering the opportunity to reduce market information asymmetry (Roma et al., 2017, 2018). Moreover, crowdfunding has been revealed to better enable diaspora philanthropy (sending resources to the country of origin). Indeed, diasporans in turn can offer network and knowledge that can offset crowdfunding's vulnerabilities (Flanigan, 2017). However,

in the absence of clear rules, it may offer opportunities for malevolent entrepreneurs to fraud investors, especially in equity-based platforms (Baucus and Mitteness, 2016).

From an economic perspective, research has started investigating the subsequent economic performance of projects funded in crowdfunding, as reflected by the market introduction of innovative products (Schmidt, 2015). Specifically, Stanko and Henard (2017) were among the first to show that the number of backers in the campaign influences the future success of the project in the market. They also demonstrated that involving consumers in the new product development (e.g., by collecting their ideas and suggestions) through crowdfunding induces radical innovation focus in company's future efforts. In a similar vein, Smith (2015) has examined post-campaign relationship of creators and backers in the videogame industry, highlighting how the formers utilise inputs provided by the funders in the videogame production phase.

From a social perspective, studies have stressed the ethical role of crowdfunding (Hossain and Oparaocha, 2015), revealing how it could be used for sustaining campaigns to fund medical research (Del Savio, 2017) or for defining the public policies, such as done during the G1000 event (a Belgium deliberative democracy project during which citizens contributed to the definitions of public policies) (Jacquet and Reuchamps, 2016). Interestingly, financial support for deliberative democracy mainly comes from the more socially advantaged groups and they largely diverge in their democratic preferences (Jacquet and Reuchamps, 2016). After all, crowdfunding communities have emerged not only because of economic reasons, but also because they create strong social connections among people of similar set of shared values (Gleasure and Feller, 2016a).

3 IMPLICATIONS FOR SUSTAINABILITY-ORIENTED VENTURES

The conceptual discussion in the previous section shows that only very few studies have examined sustainability issues in the context of crowdfunding, in spite of the high number of sustainability-oriented initiatives launched through crowdfunding since its inception. Moreover, the results provided by the literature are somewhat contrasting. Indeed, some studies have revealed that socially and/or environmentally sustainable initiatives are more likely to succeed in crowdfunding than those that do not exhibit such features (Calic and Mosakowski, 2016), whereas others have suggested that sustainability-oriented projects do not present a significant advantage in terms of crowdfunding success, but rather a disadvantage (Hörisch, 2015). Furthermore, literature has not yet examined a number of important issues with specific regard to the context of sustainability-oriented initiatives, such as how creators should design and manage these crowdfunding campaigns, or whether crowdfunding can trigger people's awareness about sustainability issues. In contrast, numerous contributions have examined crowdfunding from a more general perspective. Therefore,

we believe it is essential to make an effort to understand how the findings in the general crowdfunding literature, discussed in the previous section, can be re-interpreted and adapted to the specific context of sustainability-oriented crowdfunding projects, and combine them with the results emerging from the few studies focusing on this type of projects. Hence, in the present section, we discuss the main implications that the findings examined in Section 2 have on sustainability-oriented crowdfunding projects. This effort will be conducive to the formulation of a number of key propositions opening up new paths for research on the relationship between crowdfunding and sustainability, as well as support practitioners in the development of crowdfunding campaigns aimed at promoting and achieving sustainable goals. In discussing these implications, we use the five-dimension framework previously introduced.

3.1 Implications for creators of sustainability-oriented campaigns

The extant literature on crowdfunding suggests that, along with some personal characteristics (e.g., positive reputation, creator's skills and geographical origin) (Mollick, 2014; Li and Martin, 2016), project creators need to be very careful to how they communicate with the pool of backers, in the attempt to increase their likelihood of success. Indeed, they have to pay particular attention to the crowdfunding pitch, by choosing an appropriate linguistic style in order to capture the interest of potential funders (Ryu and Kim, 2016; Parhankangas and Renko, 2017). Moreover, interacting with the community of backers by providing updates about advancement and schedule of the project is paramount for the campaign success (Hobbs et al., 2016; Cho and Kim, 2017). Transferring these general findings to sustainability-oriented projects, we argue that the effort of the creator towards more effective communication and interaction with backers should be even more important for creators of sustainability-oriented projects (e.g., Hörisch, 2018). This is mainly due to the fact that often the creators of this type of projects launch a crowdfunding campaign to fund intangible outputs which are unlikely to provide a direct consumption benefit to the backers (Hörisch, 2015; Parhankangas and Renko, 2017). Indeed, these projects often provide a public good, which may therefore improve the environment and the welfare of the whole society in the long term, rather than satisfying an immediate and individual need of consumption (e.g., Corazzini et al., 2015). As such, these projects suffer from a disadvantage if compared with more commercial initiatives, which, instead, tend to reward backers with the product that the entrepreneur intends to develop and commercialise through the crowdfunding campaign. Indeed, because of the less tangible and immediate nature of the output usually characterising sustainability-oriented initiatives, it may become more difficult for the creators to persuade backers to fund their projects as compared with their commercial counterparts (Hörisch, 2015). In a sense, the uncertainty perceived by potential

backers of sustainability-oriented projects is magnified, because, along with the uncertainty coming from the intrinsically risky nature of the crowdfunding investment, there is an additional uncertainty since the benefits of the project are likely to be perceived by backers as difficult to measure, and at any rate unlikely to affect backers directly and in the short term. Therefore, we believe that creators of these projects should spend more effort and time, than the creators of commercial projects, in the design and management of the campaign and its follow-up activities to increase their odds of success. Specifically, they need to spend more effort and time in explaining the goal of the project and stress its importance by providing more detailed and accurate crowdfunding pitch including videos, images, and textual descriptions. At the same time, they need to effectively communicate with potential backers during the campaign, in order to transmit their passion, preparedness, sense of belonging to the crowdfunding community, and, above all, the values related to the accomplishment of a sustainability-oriented project. Furthermore, using a language that communicates a sense of hope, optimism, resilience, and confidence may increase the fundraising performance of the campaign, by providing positive signals to the potential funders (Anglin et al., 2018). These efforts would help increase backers' trust in this type of projects and compensate for higher uncertainty to which these backers are exposed (Baucus and Mittenness, 2016; Hobbs et al., 2016; Cumming et al., 2017). Thereby, we advance that the major implication for the creators of sustainability-oriented campaigns is that they should recognise the higher uncertainty affecting potential contributors to these campaigns as compared with those of commercial projects, and make a stronger effort to develop communication skills that allow them to effectively engage backers and let them understand the importance of funding their sustainable projects. Accordingly, we formulate the following proposition that summarises the discussed implications and, at the same time, opens up room for future empirical research:

Proposition 1. *As compared with creators of commercial projects, creators of sustainability-oriented campaigns are required to pay significantly higher attention and make stronger effort to communicate with potential backers starting from campaign preparation to follow-up activities.*

3.2 Implications for backers of sustainability-oriented campaigns

The extant literature shows that backers' cultural characteristics, their risk attitude and geographical distance with respect to the creators of crowdfunding campaigns play a significant role in explaining their funding decisions (Burtch et al, 2014; Morse, 2015; Kang et al., 2017; Zhao et al., 2017). The scope of the campaign is also essential to capture the interest and the commitment of backers. Indeed, when backers identify themselves with the values promoted by the campaign, they

participate more actively and this, in turn, increases the likelihood of campaign success (Kromidha and Robson, 2016; Cumming et al., 2017; Zhao et al. 2017). Committed backers contribute to share and promote the campaign with other individuals in their social networks, keep their community interested and active in the project, and favour the interaction between creators and the community (Parker, 2014; Kromidha and Robson, 2016; Zhao et al., 2017), thus broadening the reach of the campaign and capturing the attention of potential backers. We argue that committed backers are particularly important for sustainability-oriented crowdfunding projects. Actually, creators of these projects are required to leverage the role of these backers even more than creators of commercial projects, to promote the campaign and the social benefits of their project via online word-of-mouth mechanisms, and thus be able to increase the likelihood of success. This is because, as discussed above, backers of sustainability-oriented initiatives are exposed to higher uncertainty as compared with those of commercial campaigns due to the less immediate and discernible benefits they perceive from this type of projects (Hörisch, 2015). Therefore, we expect that, to overcome backers' potentially higher hesitations towards funding sustainability-oriented projects, creators can count on a number of committed backers, e.g., individuals who really care about sustainable initiatives, and engage them to become ambassadors of the campaign within their networks. Indeed, by relying on the existence of close and already established relationships, committed backers can effectively transfer positive sentiment and information to their networks, hence favouring the creation of shared trust around the creator, the project and its benefits, and thus helping to mitigate the intrinsically higher uncertainty that characterises sustainability-oriented projects (Polzin et al., 2017; Zhao et al. 2017). Therefore, we advance that the major implications regarding the role of backers in sustainability-oriented campaigns is that the committed backers' social capital is more likely to be crucial for the success of these campaigns as compared with more commercial campaigns. Accordingly, we propose:

Proposition 2. *The role of committed backers in promoting the campaign within their networks and thus exploiting their social capital is more important for sustainability-oriented projects than for commercial crowdfunding projects to increase the likelihood of campaign success.*

3.3 Implications for sustainability-oriented campaigns

While empirical findings reveal that non-profit oriented campaigns tend to significantly outperform others in term of pledges received by the community of backers and interest towards the campaign itself (Jian and Usher, 2014; Pitschner and Pitschner-Finn, 2014; Yuan et al., 2016), there is contrasting evidence when sustainability-oriented campaigns are explicitly considered. As discussed

above, some studies showed that socially and/or environmentally sustainable initiatives are more likely to succeed in crowdfunding than those that do not exhibit such features (Calic and Mosakowski, 2016). However, according to other studies no significantly higher, but rather even lower, chances of success are associated with sustainability-oriented projects (Hörisch, 2015), although the likelihood of success may depend on the project objectives in terms of market impact and growth (Hörisch, 2018). Nonetheless, these valuable contributions do not provide detailed indications on how a sustainability-oriented campaign should be designed and, specifically, how instruments, e.g., goal and pledges, should be set. Here we discuss how the general findings related to the campaign instrument can be tailored for sustainability-oriented campaigns. The extant literature confirms the intuitive belief that campaigns with less demanding goals are more likely to succeed (Mollick, 2014; Kunz et al., 2017; Zhang et al., 2017). More interestingly, the general literature on crowdfunding reveals that lowering the minimum level of funding that entitles to a reward and, at the same time, increasing the number of pledges, by practicing backers' segmentation, are more likely to result in a successful campaign (Hu et al., 2015; Kunz et al., 2017). In this regard, we point out that two aspects should be considered when a creator designs a campaign for a sustainability-oriented initiative, especially in reward-based crowdfunding platforms. First, a creative effort of tying sustainability-oriented initiatives with more tangible rewards and products, perhaps not exclusively gadgets, could contribute to soften backers' perception that they cannot get immediate and clearly discernible benefits from sustainability-oriented projects (Hörisch, 2015). In turn, this would mitigate the portion of uncertainty pertaining to the intangible and public good nature of these projects. Second, we argue that practicing more fine-grained segmentation through an increase of the number of pledges could be especially important for sustainability-oriented campaigns, since this could allow to better distinguish those backers that are really committed, trust the project objectives and fully share the relative values, and therefore do not need to be incentivised much (Belleflamme et al., 2014), from those who are instead more uncertain about the benefits of the project and thus need to be provided with more tangible and direct reasons to fund the project, e.g., consumer products (Roma et al., 2017). Because of these two considerations, we expect the sustainability-oriented campaigns offering more tangible rewards tend to be more successful than those offering less tangible rewards. Moreover, we conjecture that segmentation through an increase of the number of pledges should be more effective in increasing the likelihood of campaign success for sustainability-oriented initiatives than for commercial projects. As for the campaign goal, we argue that, *ceteris paribus*, the higher uncertainty characterising backers of sustainability-oriented initiatives should drive creators to set lower goals for these initiatives than for commercial projects. Accordingly, we formulate:

Proposition 3a. *Sustainability-oriented campaigns offering more tangible rewards tend to be more successful than those offering less tangible rewards.*

Proposition 3b. *More fine-grained segmentation through an increase of the number of pledges is more effective in raising the odds of campaign success for sustainability-oriented initiatives than for commercial projects.*

Proposition 3c. *Sustainability-oriented campaigns tend to have lower goals than their commercial counterparts, ceteris paribus.*

3.4 Implications for platforms hosting sustainability-oriented campaigns

The previous literature on crowdfunding highlights two important aspects related to the platforms hosting crowdfunding campaigns. First, local institutions and associations play an important role in providing favourable conditions for crowdfunding platforms to develop (Vasileiadou et al., 2016). In general, given the novelty of the phenomenon, institutional endorsement is certainly necessary to increase the interest of entrepreneurs and potential investors towards this new form of financing and thus promote the growth of platforms (Vasileiadou et al., 2016). We believe that this aspect becomes extremely important especially for sustainability-oriented initiatives as institutional support has been always recognised as crucial to spread out awareness and consensus across populations about sustainability themes, e.g., climate change, pollution, circular economy (Hörisch, 2015). As the role of institutions in promoting crowdfunding and sustainability-oriented initiatives is recognised as very important even when these two phenomena are considered separately, it follows that this role is magnified when crowdfunding is used for financing sustainability-oriented projects. Therefore, the growth of crowdfunding platforms explicitly focusing on financing sustainability-oriented projects is very likely to depend on the institutional context (e.g., initiatives and regulations at country and/or regional level) (Vasileiadou et al., 2016). In particular, we argue that crowdfunding platforms focusing on sustainability-oriented projects will be more likely to attract creators and backers, and thus succeed in the market, in institutional contexts that actively promote and support both the growth of crowdfunding and the development of impactful sustainability initiatives.

The second aspect is more closely related to the role of crowdfunding platforms in activating the virtuous circle of cross-side network externalities between creators and funders, which makes the platform prosper (Belleflamme et al., 2014). Indeed, project creators unambiguously prefer platforms populated by a large number of backers in order to increase their likelihood of being funded. Therefore, platform should be able to attract a high number of backers to be effective for

project creators. Vice versa, backers are attracted by platforms where they can find high quality projects, which may provide relevant investment returns in terms of products (e.g., reward-based crowdfunding) or equity securities (e.g., equity-based crowdfunding). Therefore, in designing and managing their platforms, platform owners need to facilitate the matching and interaction between creators and backers, as well as the media diffusion of the campaigns (Galuszka and Brzozowska, 2017; Kang et al., 2017). Taking into account these considerations for sustainability-oriented campaigns, we argue that the role of crowdfunding platforms is fundamental to the success of such campaigns. That is, we expect that sustainability-oriented campaigns launched in crowdfunding platforms that are more active in communicating and promoting funding of sustainability-oriented initiatives are more likely to be successful. For instance, crowdfunding platforms placing sustainability-oriented projects on their homepage and/or recommending them repeatedly to the backers (Corazzini et al., 2015; Meyskens and Bird, 2015), or even creating specific sections of their website for such project category should be more likely to facilitate the success of these campaigns.

Based on the two discussed arguments, namely the role of the institutional contexts for the growth of crowdfunding platforms and the role of the platform for the success of crowdfunding campaigns, we advance the following propositions:

Proposition 4a. *Crowdfunding platforms focused on financing sustainability-oriented projects tend to prosper more in institutional contexts more active in promoting and supporting sustainability initiatives.*

Proposition 4b. *Sustainability-oriented campaigns launched in crowdfunding platforms that are more active in communicating and promoting funding of sustainability-oriented initiatives are more successful.*

3.5 Implications for the outcomes of sustainability-oriented crowdfunding campaigns

In spite of their relevance, scholars have only recently started to investigate the multiple consequences of crowdfunding campaigns in terms of their immediate effects on the project creator's ability to actually complete the project and commercialise/provide its output, and in terms of their general impact on the development of entrepreneurship and society as a whole. Initial findings suggest that a good performance in crowdfunding enhances the likelihood that the project will succeed in the market, due both to the funds collected and the market signals provided to professional investors (Drover et al., 2017; Roma et al., 2017) that will positively impact on the performance in the final market (Stanko and Henard, 2017; Viotto da Cruz, 2018). More in general,

initial studies also point out that the democratisation of finance can be salutary to the development of entrepreneurship, since more competition will be entailed and consequently more funding will become available to a plethora of entrepreneurs (Cumming and Zhang, 2016; Gleasure and Feller, 2016b; Wright et al., 2016). This will be particularly positive for pro-social initiatives, including for instance those related to medical research, sustainability and democracy (Calic and Mosakowski, 2016; Gleasure and Feller, 2016a; Gleasure and Feller, 2016b; Jacquet and Reuchamps, 2016; Del Savio, 2017). Starting from these considerations, we argue that future crowdfunding research should examine more in-depth the impact of crowdfunding for sustainability-oriented projects under a dual perspective.

First, an interesting issue is to understand what happens to sustainability-oriented projects after a crowdfunding campaign: does a better performance in crowdfunding increase the chances to complete this type of projects and reach their scope? And more generally, does crowdfunding provide them with an advantage in terms of scope achievement as compared with similar initiatives that choose not to use this funding channel? While scholars have started investigating these issues for more commercial projects (e.g., Roma et al., 2017; Stanko and Henard, 2017), an analysis specifically focusing on sustainability-oriented projects is undoubtedly worthwhile. In this regard, we argue that the current findings (related to commercial projects) supporting the “theorem” that better crowdfunding performance can favour project success in the market should be even more valid for the sustainability-oriented initiatives. That is, the role of crowdfunding is likely to be even more crucial for the overall success of sustainability-oriented initiatives. The reasons are related to the fact that, as compared with commercial projects, these initiatives encounter more difficulties in receiving direct funding from financial resource providers, such as banks or venture capitalists, as their nature, which is often non-profit, requires profit to be re-invested in the initiative or, more in general, is not highly remunerative for investors (Choi and Gray, 2008). Accordingly, good crowdfunding performance may attract the interest of other investors, thus favouring the fundraising process. Therefore, together with public intervention, crowdfunding (including its donation form) may be the only way to fund the activities through which these sustainability-oriented initiatives can succeed.

The second element is related to the role of crowdfunding as a mechanism to sensitise the public opinion with regard to sustainability issues. Specifically, the growth of the crowdfunding phenomenon and, specifically, of sustainability-oriented initiatives funded through crowdfunding (and successfully following up) can activate a bandwagon effect that can further stimulate individuals and the society as whole to behave following sustainable models both in the environmental and social spheres (Burtch et al., 2013; Agrawal et al., 2015). In other words, we

advance that, by increasing the social attention and audience towards sustainability issues, crowdfunding can accelerate the process toward the achievement of a more sustainable society. Based on these two main arguments, we derive the implications regarding the impact of sustainability-oriented crowdfunding, by proposing that:

Proposition 5a. *A better performance in crowdfunding is more crucial for the overall success of sustainability-oriented initiatives than for that of commercial ones.*

Proposition 5b. *Sustainability-oriented projects funded through crowdfunding are more effective in achieving their scopes than their counterparts that do not use this funding channel.*

Proposition 5c. *By increasing the social attention toward sustainability issues, crowdfunding activates a bandwagon effect that further stimulates more individuals to behave according to sustainable models.*

4 CONCLUSION

In the last few years, the crowdfunding phenomenon has been booming, becoming a viable opportunity for entrepreneurs, artists and other individuals to get funding for their innovative projects. Particularly, many have started using crowdfunding to raise funds for sustainability-oriented initiatives, given that these types of initiatives face considerable obstacles in raising funding from traditional channels. However, in spite of the rapid accumulation of research contributions on the crowdfunding phenomenon, as well as the increasing relevance of this phenomenon for sustainability-oriented projects, the number of studies investigating the relationship between crowdfunding and sustainability is still scant (e.g., Hörisch, 2015; Calic and Mosakowski, 2016; Vasileiadou et al., 2016). In the attempt to contribute to fill this gap, we discussed some important implications of crowdfunding for sustainability-oriented crowdfunding projects. Specifically, transferring and tailoring the findings obtained by the general literature on crowdfunding to the context of sustainability-oriented initiatives, we have developed several theoretical propositions under a comprehensive five-dimension framework, which essentially includes the main actors, the process, and the outcomes of crowdfunding campaigns, and thus can be easily understood by both practitioners and researchers.

Specifically, for creators we have emphasised the importance of setting up an effective communication with potential backers, starting from campaign preparation to follow-up activities, as backers of sustainability-oriented campaigns are more exposed to uncertainty than those of commercial campaigns, given that sustainability-oriented initiatives often do not provide direct and immediate consumption benefits. We have also highlighted the role of engaged and committed

backers in reducing the uncertainty of other backers by exploiting their social capital. With regard to the design of the campaign, besides setting the campaign goal at relatively low levels, we have suggested that creators of sustainability-oriented campaigns (especially in reward-based crowdfunding) should promise more tangible rewards and practice more fine-grained pledge segmentation in order to increase their chances of campaign success. We have also advanced that institutional context matters in the growth and development of crowdfunding platforms supporting sustainable projects. Moreover, platforms can significantly enhance the likelihood of success of sustainability-oriented initiatives if they promote and provide more and better space to these campaigns in their websites. Finally, with regard to the consequences of crowdfunding campaigns, we have argued that succeeding in crowdfunding is more beneficial to the success of sustainability-oriented initiatives than to the success of commercial initiatives. Actually, the success of sustainability-oriented campaigns can significantly increase the attention and awareness of the public towards sustainability issues, and thus contribute to the dissemination of behaviours consistent with sustainable society models.

As mentioned, the above implications have been derived by re-interpreting the general findings available in the crowdfunding literature and carefully adapting them to the specific context of sustainability according to our five-dimension framework. Therefore, being the output of a conceptual discussion, they certainly need empirical validation. This paves the way to a number of avenues for future research on the use and impact of crowdfunding for sustainability-oriented projects. Indeed, future studies could aim at formally validating our arguments in order to better understand the multiple issues we have discussed with regard to this type of projects, ranging from the design and management (including communication) of sustainability-oriented campaigns to broader issues such as the role of the institutional context in the growth of crowdfunding platforms and the role of crowdfunding in moving towards a more sustainable society.

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Understanding the Crowdfunding Phenomenon and its Implications for Sustainability

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