

## **Fundraising and governance of sustainability-oriented ventures:**

### **Evidence from equity crowdfunding**

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#### **Abstract:**

The present research examines the short-term and the long-run performance of sustainability-oriented ventures (SOVs) seeking to raise funds in equity crowdfunding (ECF) markets. By examining the combined signals of sustainability orientation and corporate governance mechanisms, our empirical analysis substantiates the hypothesis that only SOVs with a nominee ownership structure have significantly better chances than other ventures to realize short-term success. In the long run, SOVs that secure funds in ECF markets exhibit higher follow-on fundraising capacity. Hence, a sustainability orientation not only imparts ethical value to investors but also fosters sustained economic performance and long-term viability.

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## 1. INTRODUCTION

Entrepreneurial finance leads to specific challenges in business ethics, and sound corporate governance has been demonstrated to be important to keep up the promise of ethical behavior in the relationship between investors and entrepreneurs (e.g., Fassin and Drover, 2017; Crifo et al., 2019; Veldman et al., 2023). Crowdfunding is a recent source of entrepreneurial finance, and a claim has been made as to the potentially beneficial role of crowdfunding in supporting ethical ventures (e.g., Johnson, 2015; Defazio et al., 2021). However, crowdfunding is not a homogeneous reality, and equity crowdfunding (ECF) is a unique setting because it implies ownership of the firm. Up to date, most studies on ethical issues in crowdfunding focus either on reward-based crowdfunding (André et al., 2017; Cumming et al., 2021a; Calic et al., 2023; Defazio et al., 2021) or on crowdlending (Gafni et al., 2021). Equity crowdfunding and the specifics of governance mechanisms allowing crowd owners to control entrepreneurs' conformity with ethical goals have received less attention. This is a relevant omission, as equity investments are a critical source of capital to start ventures in innovative and particularly uncertain environments, where risk is high and collateral is rare. In fact, prior work on ethics and governance in entrepreneurial finance specifically focused on professional venture capitalists and business angels, not on equity crowdfunding (Fassin and Drover, 2017). There is hence a research gap concerning the role of corporate governance in equity crowdfunding to uphold the promise of specific ethical goals, such as sustainability orientation.

Equity crowdfunding has been identified as an important resource, not only in providing initial funding to sustainability-oriented ventures (SOVs) but also in providing cognitive resources to the process of sustainability-oriented innovation (Troise et al., 2021). However, the possibility of making the economy more sustainable is contingent on SOVs eventually turning into economically

sustainable businesses (see, e.g., Cumming et al., 2016a). A recent study by Cumming et al. (2024) focuses on crowdfunding platforms and documents that those that implement ESG criteria in selecting the ventures to list on their portal are more likely to attract more investors and, hence, to survive over time. In this paper, we investigate the long-term performance of equity-crowdfunded SOVs to address the following research question: does a venture's sustainability orientation also lead to sustainable business performance for crowd investors?

Long-term viability requires long-term commitment and support from stakeholders such as investors to translate into an economically sustainable business (see, e.g., Fischer et al, 2020). For such support to materialize, the providers of resources need to derive utility from their investment. A fast-growing literature has recently focused on crowdfunding success of SOVs, where the emphasis is on short-term performance conceived as campaign success (Calic and Mosakowski, 2016; Bento et al., 2019; Vismara, 2019; Testa et al., 2020; Chan et al., 2021; Defazio et al., 2021; Hornuf et al., 2021; Wessel et al., 2021; Berns et al., 2022; Caputo et al., 2022; Mendoza et al., 2022; Siebenreicher and Bock, 2022). In this context, short-term success corresponds to the ability to successfully secure funds in a crowdfunding campaign and, specifically, to the attainment of the funding goal. There is however still a lack of research on the long-run (i.e. post-campaign) performance of ventures (Böckel et al., 2021; Wehnert and Beckmann, 2023). One notable exception is Mansouri and Momtaz (2022) who examine financial performance related to initial coin offerings conducted to fund sustainable entrepreneurship. However, blockchain-based markets are a very specific segment of the entrepreneurial finance landscape.

The present research is one of the very first to explicitly address both, the short-term and long-run performance of equity-crowdfunded SOVs. To do so, we examined a sample of 534 initial offerings made between 2014 and 2020 on Crowdcube and Seedrs, the UK's two most important

equity-crowdfunding platforms. In this sample, we identified 114 sustainability-oriented ventures (SOVs). We worked from the assumption that sustainability orientation acts as a positive signal for prospective sustainability-oriented investors. A piece of information is of course an effective signal only if it comes at a cost to the venture (Spence, 1978; Leland and Pyle, 1977). This is the case when entrepreneurs render some of their control rights over the venture to future investors. Hence effective corporate governance is expected to be an important dimension in the relationship between sustainability orientation and performance. Based on prior literature, we derived a set of hypotheses where sustainability orientation is supposed to be a driver of short-term and long-run performance. We tested these hypotheses, running various regressions with short-term performance and long-run performance as the dependent variables. Alternatively, we also use failure as the dependent variable, and to the best of our knowledge, we are the first to test the impact on successful and unsuccessful offerings simultaneously.

Our results corroborate the expected positive impact of sustainability orientation on short-term performance, but only when this is associated with the costly signal of corporate governance mechanisms. Conditional on short-term success, we also observe a significantly positive impact of sustainability orientation on long-run performance as measured by the probability of attracting additional funds after the initial offering. Hence, we find empirical evidence that, provided the corporate governance mechanisms, a sustainability orientation has not only ethical value but is also conducive to economic performance and sustainability for SOVs.

This study contributes to at least three fields of research: business ethics, sustainable (or green) finance, and entrepreneurial finance (specifically equity crowdfunding). The first, major contribution is to business ethics, where we join the broader discussion aiming to understand if finance in general (Hockerts et al., 2022), and more specifically entrepreneurial finance (Fassin

and Drover, 2017), is antagonistic or compatible with ethics. As noted by Guedhami et al. (2023), recent research in some ethical aspects of microfinance has been facilitated by access to novel datasets, including crowdfunding, but we remain in the early stages of developing the ethics literature in this area. Grounding the paper in the business ethics literature, we focus on sustainability, which is indeed a major concern in contemporaneous business ethics (cf. the special issue of the *Journal of Business Ethics* introduced by de Lange et al., 2012). Specifically, we hypothesize that if crowd investors see value in the existence of SOVs per sé (beyond monetary returns), they can be expected to support SOVs (Testa et al., 2019; Tenner and Hörisch, 2021). Such perceived value and the material support it triggers is a potential driver of venture success, not only over the short run (campaign success in initial equity crowdfunding success) but also over the long run (successful follow-on funding or merger prospects). This raises of course the question of the materiality of sustainability-oriented strategy beyond mere discourse and potential greenwashing. For that reason, investor support of SOVs most likely depends on the existence of organizational arrangements, such as corporate governance, which grant investors effective leverage over an SOV's strategy, as shown consistently in our empirical results.

Secondly, we contribute to the more general literature on sustainable finance (Edmans and Kacperczyk, 2022), where the impact of sustainability orientation on investor performance has been a longstanding issue (Brooks and Oikonomou, 2018; Friede et al., 2015). But the entrepreneurial finance segment is still under-researched in this respect. Cumming et al. (2022) identify impact investment and sustainable development as a promising avenue for future research on venture capital. There is presently emerging research on impact investing and sustainable development in the traditional venture capital segment (Barber et al., 2021; Bocken, 2015; Cumming et al., 2016b; Hegeman and Sorheim, 2021; Randjelovic et al., 2003). We operate with

a specific focus on the alternative finance segment and, more specifically, sustainable equity crowdfunding. We analyze if equity-crowd investors can expect superior performance when they back SOVs.

Finally, there are few studies up to date related to post-campaign performance in equity crowdfunding in general (Butticè et al., 2020; Coakley et al., 2022a; Drover et al., 2017; Hornuf et al., 2018; Rossi et al., 2022; Signori and Vismara 2018; Walthoff-Borm et al., 2018a). We contribute to this strand of literature and are the first to identify sustainability orientation as a potential driver.

The remainder of this article is structured as follows. In section 2, we briefly review the literature on sustainability and performance issues in the ECF market. Hypotheses on the link between sustainability orientation and the performance of ECF-backed entrepreneurial firms are developed in section 3. Section 4 presents the empirical research design. Section 5 contains a presentation of the results. We discuss these and conclude in section 6.

## **2. LITERATURE REVIEW**

The present research examines the influence of sustainability orientation on the performance of ECF-backed ventures.

### *2.1. Sustainability orientation and its relation to investor performance*

In their introduction to the special issue on sustainable finance, Edmans and Kakperczyk (2022) define sustainable finance as “the integration of environmental, social, and governance (“ESG”) issues into financial decisions” (p. 1309). Hussain et al. (2018) explicitly relate sustainable development to three dimensions: environmental, social, and economic. Sustainability is hence typically presented as a complex multidimensional concept, where the precise linkage and

potential causal relationship between the various dimensions are still not well understood and, hence, an object of ongoing research. In the past, empirical studies concerning the link between sustainability and financial performance have mostly been conducted on samples of stock-listed public corporations. Among those studies, the impact of various sustainability metrics on short-term stock returns has received much attention. Flammer (2013), for instance, examines the stock market reaction to the announcement of eco-friendly and eco-harmful events. She observes positive stock-price performance in the case of eco-friendly events and negative performance when eco-harmful events are announced. More recently, Capelle-Blancard and Petit (2019) conduct an extensive event study, where the authors examine the influence of public news concerning a firm's sustainability on its stock returns. They find an asymmetry in the reactions to positive and negative ESG news, where the former has no significant impact on stock returns, and the latter features significantly negative stock-price reactions. Hence, the relationship between sustainability and financial performance is far from being trivial, and the results of various studies are somewhat equivocal.

Sustainability is measured, in many contemporaneous empirical studies by using various ESG rankings, where the criteria used to measure each of the three dimensions (environmental, social, and governance), as well as their respective weight feature significant variance from one ranking to the other (Berg et al., 2022). From a theoretical perspective, there are actually various tensions between the constituent dimensions of corporate sustainability, and resolving those tensions in an integrative framework is a demanding task (Hahn et al., 2015). The difficulty of defining a unanimously accepted multi-criteria metric for sustainability can be avoided by focusing on one of its three key dimensions only. Flammer (2013), for example, looks at stock-price performance related exclusively to the environmental dimension of sustainability. Other examples focused on



the environmental dimension of sustainability and its relation to performance are Capelle-Blancard and Laguna (2010) and Karpoff et al. (2005).

The above studies, however, all have in common the fact that they were conducted using data from samples of stock-listed public corporations, where the dependent variable, performance, is measured using abnormal daily stock returns. More recently, Edmans (2023) makes a plea to disaggregate ESG and focus research on separate dimensions for the sake of theoretical relevance: “Empiricists often use aggregate ESG scores, even if the question or identification strategy focuses on a specific issue. For example, a paper might study how a company’s response to climate change news depends on its ESG rating. However, it may only be the E dimension that’s relevant” (p. 12). We follow this lead and focus mostly on the environmental dimension of sustainability. This is coherent with the finding by Cumming et al. (2024) that crowdfunding platforms with higher ESG criteria are more likely to survive over time but, while G is the most significant factor to platform survival, E has increased in importance most recently.

## *2.2. Performance measurement in crowdfunding*

Compared to public corporations, the impact of sustainability orientation on financial performance has received less attention in the case of young ventures. This is partly due to the evident lack of data, where stock-market returns are simply not available. Entrepreneurial finance has consequently engaged to develop its performance metrics. In studies related to ventures funded by crowd-investors, performance is regularly proxied through campaign success, where the attainment of the initially set funding goal is seen as a measure of short-term performance (Vismara, 2019; Defazio et al., 2021; Hornuf et al., 2021; Berns et al., 2022; Siebenreicher and Bock, 2022; Mendoza et al., 2022).

Long-term performance metrics are less developed for ECF-backed entrepreneurial firms. In specific research efforts on the connection between crowdfunding and sustainability, most of the work to date has focused on the pre-campaign stage, and post-campaign research is still relatively under-developed, as observed in a recent systematic literature review (Böckel et al., 2021). Empirical research has however begun to engage in the endeavor of studying long-run success. One example is the seminal study by Cumming et al. (2019) on the importance of ownership structure as a driver of success over a longer time horizon than just initial campaign success. In their work, the authors identify an entrepreneurial ECF-backed firm “as successful when, after successfully raising equity in crowdfunding offerings, it either attracts further equity financing or delivers an exit opportunity to crowdfunding investors, either in the form of IPO or M&A” (Cumming et al., 2019). Long-run performance is hence operationalized through the success in raising follow-on funding or successful exit. This approach is consistent with our research question focused on the economic sustainability of SOVs, where economic sustainability critically depends on ongoing support from various stakeholders, such as the providers of equity capital. Another recent example, where post-campaign success is measured using follow-on funding is Buttice et al. (2020), who use the attraction of venture capital funding as a performance indicator. Hornuf et al. (2018) and Signori and Vismara (2018) also use various forms of follow-on funding as proxies for the long-run performance of ECF-backed ventures. Alternatively, Signori and Vismara (2018) report the failure rate of entrepreneurial ventures, which can be considered as a proxy for negative performance, and the authors show that failure is relatively low for firms that successfully completed an ECF campaign. However, none of these studies are specifically aimed at the impact of sustainability orientation on such long-term performance.

### *2.3. Sustainability orientation and corporate governance*

Prior research indicates a positive relationship between corporate governance and eco-friendliness. Yao et al. (2023) show that empowering minority shareholders by granting them effective online voting rights pressures firms into more eco-friendly behavior. This is consistent with Broccardo et al. (2022) who demonstrate the influence of effective shareholder voice in pushing the sustainability agenda. Hence, shareholder empowerment through effective corporate governance reduces the gap between ownership and control and limits managers' discretion to engage in unethical behavior. In other words, it makes unecological behavior costly for entrepreneurs. In the case of equity-based crowdfunding, crowd investors share the characteristics of minority shareholders. Ventures that seek funding on ECF platforms can opt for either one of two governance systems: (1) direct ownership or (2) the nominee governance system (Cumming et al. 2021b). Direct ownership leaves minority shareholders with the classical dilemma of the separation of ownership and control (Fama and Jensen, 1983), whereas the nominee governance mechanism bundles the voting rights of all crowd investors, and hence confers on the nominee effective power of influence. Cumming et al. (2021b, p. 84) suggest that, in the case of equity crowdfunding, corporate governance may play an important role in signaling value to potential investors.

## **3. HYPOTHESES**

Sustainability orientation is likely to be positively perceived by potential backers for at least two reasons: (1) growing ethical commitment and positive emotions linked to the environment which influence the utility of a significant and increasing part of crowd investors (Testa et al., 2019; Tenner and Hörisch, 2021; Edmans and Kacperczyk, 2022; Heeb et al., 2022), and (2) the

potentially positive impact of sustainability for future business prospects and, hence, long-run economic performance (Friede et al., 2015; Hornuf and Siemroth, 2022). Declaring sustainability commitment in an ECF campaign may thus act as a positive signal toward potential investors, leading to an increase in the probability of a venture's short-term success as measured by campaign success. Consequently, we may expect sustainability orientation to act as a driver of short-term performance.

However, crowdfunding markets are typically characterized by a high degree of information asymmetry (Vismara, 2018). It is consequently difficult for a member of the crowd who has neither the experience nor the incentives to conduct thorough due diligence to distinguish between real sustainability orientation and mere cheap talk. For self-declared sustainability orientation to function as a credible signal, there must be a cost attached. As Vismara puts it, "intentions are credible signals only when they are binding, and repercussions occur if the signal's senders do not follow through on their intended behavior" (Vismara, 2018, p. 34).

One way of making a signal costly to the entrepreneur is by construing governance mechanisms that confer on investors certain control rights. Sharing control comes at a cost to the entrepreneur because it allows to impose a penalty on behavior that deviates from declared intent. Effective corporate governance puts a check on the entrepreneur because it grants investors leverage on a venture's strategic decision-making. But what is effective governance in the context of crowdfunding? Governance can be considered effective when control rights do not only exist on paper but also when investors are given real power of influence. In that respect, equity crowdfunding faces challenges comparable to the open stock market, where public firms face the separation of ownership and control (Fama and Jensen, 1983).

In equity crowdfunding, there exist two forms of shareholder governance: direct ownership or the nominee structure (Butticè et al., 2020; Cumming et al. 2021b). Direct ownership leads to a dispersion of control and voting rights, giving each shareholder a potential voice but no effective control. Consequently, agency costs are expected to be relatively high under the direct ownership model (Butticè et al., 2020). The nominee structure bundles all crowd-investors' control rights, which are then exercised by the nominee, typically the platform, on behalf of the owners. This confers real influence and power. The platform is incentivized to act as an effective monitor if it wants to maintain its reputation as a reliable actor in the market for entrepreneurial equity finance. For the above reasons, we consider sustainability orientation to be a credible positive signal for crowd investors when the offering implies a nominee structure. Consequently, although there is perceived value in sustainability orientation, we should expect that declared sustainability orientation alone has no significant impact on performance. However, when such an orientation comes with effective governance, then we should observe a positive impact on campaign success according to signaling theory.

*Hypothesis 1: Sustainability orientation is positively related to short-term venture performance (campaign success) if and only if offerings feature a nominee ownership structure.*

We now examine the impact of sustainability orientation on the ECF-backed ventures' long-run performance, because "a signal's value is confirmed if the senders subsequently outperform their peers who did not send the signal". (Vismara, 2018, p. 46). To rigorously analyze the drivers of SOVs' post-campaign performance, we need to distinguish between the initial campaign outcome itself and the signal concerning sustainability. In fact, prior research has shown that good

crowdfunding performance favors project success in the market (Messeni Petruzzelli et al., 2019) for any kind of commercial project. Hence, we expect initial crowdfunding success to be a significant driver of a venture's post-campaign long-run performance for any venture, sustainability-oriented or not.

*Hypothesis 2: Ventures that successfully complete an initial equity crowdfunding offerings have a significantly higher probability of being successful over the long run.*

If sustainability orientation is information positively perceived by investors, it should make an additional contribution (beyond initial campaign success) to the overall explanation of long-run performance as measured by successful follow-on funding. There are several reasons for the positive perception of sustainability orientation and its potential role in the success of follow-on funding. One possible explanation is specific to the group of ethical investors, while other arguments are valid for all investor categories. One of the reasons is that sustainability orientation carries ethical value, but only for a specific category of the investor community. These are the impact investors, whose utility function is at least partially driven by ethics, and not by prospects of financial return only. Doing “the right thing”, in ethical terms, may be a source of positive emotions for such investors (Heeb et al., 2022), and they may readily invest in sustainability-oriented ventures, especially if these ventures have already proved to be successful over the short run. Hence, impact investors are driven to contribute to follow-on funding when ethics are at stake. Taste could also play a role, where “green” investments may simply be preferred to “brown” investments by certain individuals (Edmans and Kacperczyk, 2022). Hence, the odds of follow-on funding of sustainability-oriented ventures should be expected to increase, because they benefit

from a potentially larger pool of investors than purely commercially oriented ventures. The reason is that this pool of resources extends to impact investors (i.e., impact venture capital funds, impact business angels).

Beyond ethical motives or taste, which only concern one (albeit growing) part of the contemporaneous investment community, discourse on sustainability orientation may also be perceived as positive information with potentially strong implications for a venture's future cash flows and, hence, its prospects for long term value creation for all investor types. That is because sustainability orientation can reduce risk, related to environmental litigation or the growing arsenal of environmental norms and regulations. Sustainability orientation has also the potential to create new business opportunities, related to green tech, for example. This perceived positive influence of sustainability orientation on future cash flows can be expected to be especially strong for ventures that send a positive signal concerning effective corporate governance and that have already demonstrated short-term success. In fact, Messeni Petruzzelli et al. (2019, p. 146) “argue that the [...] findings (related to commercial projects) supporting the “theorem” that better crowdfunding performance can favor project success in the market should be even more valid for the sustainability-oriented initiatives. That is, the role of crowdfunding [and campaign success] is likely to be even more crucial for the overall success of sustainability-oriented initiatives.” Hence, the combination of initial campaign success with sustainability orientation should be expected to be particularly conducive to long-run success.

*Hypothesis 3: Sustainability orientation has a positive influence on long-run performance for ventures that successfully complete an initial ECF offering.*

## 4. RESEARCH DESIGN

### *4.1. Sample and Data Sources*

Being the largest market for equity crowdfunding, the United Kingdom provides the best opportunity to investigate how crowdfunding investors consider the sustainability orientation of ventures. Due to its status as the largest global market for equity crowdfunding, the UK offers researchers a substantial pool of startups that have initiated equity crowdfunding campaigns, regardless of the campaigns' ultimate success. Other countries also host ECF markets, but the volumes involved are comparatively lower in terms of both the number of campaigns conducted and the capital raised. Notably, even the United States presents a more constrained range of equity crowdfunding offerings than the United Kingdom, as evidenced by research conducted by Rossi et al. (2021). Furthermore, a majority of studies in this field have predominantly employed the UK as their empirical setting, either concentrating on a single platform in isolation or encompassing the entire market (e.g., Buttice et al., 2020; Coakley et al., 2022a; 2022b; Cumming et al., 2019; Signori and Vismara, 2018; Vismara, 2016; Walthoff-Borm et al., 2018a; 2018b). By centering our investigation on the United Kingdom, we not only align with established research practices but also enhance empirical consistency with prior studies that have similarly focused on this influential ECF landscape.

The two largest ECF platforms in the United Kingdom are Crowdcube and Seedrs. These platforms represent pioneering platforms in the domain of equity crowdfunding, fundamentally reshaping the landscape of entrepreneurial finance. Launched in 2011, Crowdcube has played a crucial role in democratizing investment by connecting startups and growing businesses with a diverse array of investors. Its innovative model allows individuals to invest in exchange for equity, promoting financial inclusivity and community engagement. Similarly, Seedrs, founded in 2009,



distinguishes itself through meticulous due diligence processes and a commitment to regulatory compliance. Seedrs provides a platform for a broad spectrum of investors, both individual and institutional, to participate in funding rounds and gain equity in promising ventures.

Ventures had to fulfill several criteria to be part of our final sample. First, follow-on offerings are removed to avoid endogeneity issues that may arise from the relation between the initial campaign and the first follow-on success. Second, we focus on UK ventures only to reduce cross-country heterogeneity related to different reporting and regulatory frameworks and to limit the variety of extra-financial reasons for seeking crowdfunding in the UK. Third, we exclude mini-bond offerings and offerings of convertible bonds. Fourth, due to their specific accounting practices, we exclude firms operating in the Finance & Payments and the Insurtech sectors. Fifth, we exclude offerings for which we could not access the information about their business “idea” and the “market” (in Crowdcube) or the “key information” (in Seedrs) sections. This results in a slightly biased selection with a larger presence of successful offerings (54% of the offerings in our sample are successful, which is slightly above the 40% to 50% statistics reported in other papers such as Vismara, 2016; Coakley et al., 2022a; 2022b; Buttice et al., 2020; Rossi et al., 2022) but we have no reason to expect any bias about the sustainability orientation or governance aspects of the offerings. These selection criteria resulted in a sample that comprises 534 initial equity offerings listed on Crowdcube and Seedrs in the period 2014-2020.

#### *4.2. Identification of SOVs*

To identify SOVs, we followed the approach of the “text as data” literature in economics (Gentzkow et al., 2019). We first performed a text analysis by inspecting the “idea” and the “market” (in Crowdcube) or the “key information” (in Seedrs) sections of the crowdfunding

offerings. This was done using a web crawling algorithm to analyze the two crowdfunding portals (i.e. Crowdcube and Seedrs) as well as accessing internet archives to go back in time and capture historical data. We used the following 32 keywords (or combination of words) derived from previous literature (Adams et al., 2016; Vismara, 2019; Mansouri and Momtaz, 2022): climate\_change, natural\_resources, pollution, waste, ecological, eco\_innovation, eco-efficient, eco-effective, eco-design, ecology, environmental, renewable, fossil\_fuel, carbon, gas\_emissions, zero\_emissions, co\_emissions, coal\_power, coal\_projects, away\_fossil, solar\_wind, global\_warming, save\_planet, greenhouse, green\_house, green\_finance, green\_investment, green\_energy, green\_deal, green\_credentials, green\_debt, new\_green.<sup>1</sup> To limit the possibility of alternative meanings, this initial selection was scrutinized by using traditional human coding.

This method yielded the identification of 119 offerings. Since some keywords might have alternative meanings, this initial selection was scrutinized by the authors to exclude ventures that are not sustainability-oriented. This led to the exclusion of 5 ventures, leaving the identification of 114 SOVs out of the original sample of 534 ventures (21.3%). Figure 1 illustrates the word cloud corresponding to the frequency of the keywords for the identification of these ventures. Examples of SOVs in the sample are “The Cheeky Panda 100%”, which commercializes low-carbon bamboo tissue products, “Antaco”, which aims at making the world cleaner by converting organic waste

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<sup>1</sup> Climate\_change, natural\_resources, pollution, waste are from the MSCI ESG Intangible Value Assessment; ecological, eco\_innovation, eco-efficient, eco-effective, eco-design, ecology are from Adams et al., (2016); environmental and renewable are from Vismara (2019). Mansouri and Momtaz (2022) use a machine learning approach, creating an ESG-specific dictionary in the startup context. They start from 70 environmental “seed words”, reported in their Table I.A.1. From this list, we selected the following words (or combination of words) fossil\_fuel, carbon, gas\_emissions, zero\_emissions, co\_emissions, coal\_power, coal\_projects, away\_fossil, solar\_wind, global\_warming, save\_planet, greenhouse, green\_house, green\_finance, green\_investment, green\_energy, green\_deal, green\_credentials, green\_debt, new\_green. Note that we use single words that comprehend a number of combinations. For instance, by using “carbon”, we include 13 combinations in Mansouri and Momtaz (2022), such as carbon\_emission, carbon\_footprint, and low\_carbon.

into a solid biofuel, and “Mishergas Energy Recovery”, which develops sustainable answers to environmental hazards whilst creating profitable business models.

#### *4.3. Corporate Governance Mechanisms*

UK equity crowdfunding platforms historically have employed two types of governance mechanisms – direct and nominee ownership (Walthoff-Borm et al., 2018; Wang et al., 2019; Butticiè et al., 2020; Coakley et al., 2022a). Under the direct ownership structure – originally associated with Crowdcube – investors directly own shares in the venture they help to fund. By contrast, the Seedrs nominee structure pools hundreds of individual investors from the crowd and accredited investors into a special purpose vehicle or nominee account. Typically, the platform acts as nominee and, by implication, as the sole legal owner when it comes to exercising control rights, but individual investors remain the ultimate beneficial owners. Crowdcube introduced the possibility to opt for a nominee structure in 2015, resulting in a choice between direct ownership and nominee offerings within the same platform. Consequently, both options—direct and nominee structures—are currently available for firms seeking funds through Crowdcube.

The direct shareholder structure enables crowd investors to directly acquire ownership in the company. Under this arrangement, crowd investors obtain shares with both voting and preemptive rights if their investment meets or exceeds a predetermined threshold established by the entrepreneur. Conversely, investments below this threshold result in shares without voting and preemptive rights. Therefore, in direct ownership ECF offerings, investors directly own shares in the ventures but small investors do not enjoy voting rights (Cumming et al., 2019). This leads to agency costs and conflicts between large and small investors (Cumming et al., 2021b).

The nominee shareholder structure stands as an alternative to the direct shareholder arrangement, wherein a single legal shareholder, known as the nominee, represents the interests of the crowd by holding shares on behalf of individual investors (Butticè et al., 2020). The nominee is endowed with decision-making authority in various matters during general meetings, encompassing issues such as company liquidation or the issuance of ordinary and preference shares. The nominee structure offers the advantage of a unified approach to monitoring and enforcing investors' rights. Investors retain indeed the right to participate in dividend distribution and uphold fiscal benefits, such as tax reliefs linked to their investments (Coakley et al., 2022a), while ventures are relieved of the need to independently manage their crowd investors, avoiding tasks such as organizing large corporate events or ensuring attendance quorums at general meetings. However, a drawback of the nominee shareholder structure is the limited opportunity for entrepreneurs to seek advice, networking, and mentoring from their investors (Walthoff-Borm et al., 2018b).

Previous studies have highlighted that the nominee structure signals better investor protection (especially for the crowd) relative to direct ownership (Wang et al., 2019; Cumming et al, 2021b). It also minimizes coordination and related administrative costs for startups as the platform as the nominee manages the arm's length relationship between the shareholders and the venture founder team through electronic voting and updates and online meetings (Butticè et al. 2020). We measure *Nominee* as a dummy variable equal to one if the ECF offering is with a nominee structure.

#### 4.4. Outcomes

We analyze the impact of sustainability orientation and governance on offering and post-offering outcomes. First, we investigate the *Short-term outcome*, measured with a dummy variable equal to 1 for offerings that collected at least the target amount of money. Equity crowdfunding platforms

employ an all-or-nothing scheme (Cumming et al., 2020). This means that offerings are successful only when funding goals are reached, and pledges are then transferred within 6 weeks from the escrow accounts to the venture's accounts. Investors thus become shareholders in the companies. When targets are not reached, all pledges are voided and ventures do not receive any funding from the campaign. *Short-term outcome* measures therefore the probability of the venture successfully raising funds in the initial campaign. This type of dependent variable has been used in many studies for ECF firms (e.g. Ahlers et al., 2015; Vismara, 2016).

Second, we measure the *Long-term outcome* of a venture that went through a crowdfunding offering by looking at what happens after the initial offering, in line with existing studies (e.g., Buttice et al., 2020; Coakley et al., 2022a, 2022b; Cumming et al., 2019; Hornuf et al., 2018; Signori and Vismara, 2018; Walthoff-Borm et al., 2018b). This is done for both successful and unsuccessful offerings, through a hierarchical criterion. First, (long-term) *Failures* are identified when firms are insolvent, liquidated, or dissolved following an offering. Failures are identified using Companies House, which is a government agency acting as the official registrar of UK companies. We use the first announcement date of the insolvency or liquidation as the failure event. Alternatively, a venture is identified as *Successful* when, after successfully raising equity in crowdfunding offerings, it either attracts further equity financing or delivers an exit opportunity to crowdfunding investors, either in the form of an IPO or M&A. If a venture conducts multiple equity rounds, the outcome is determined by the first successful equity round. To identify long-run outcomes, we monitor companies in the sample from the closing date of their initial offering to December 2022 using Crunchbase to identify capital infusions following the crowdfunding offering. We did not observe any startup that failed after raising follow-up capital. Hence, there is no overlap between the *Failure* and the *Successful* outcome.

#### 4.5. Control Variables

Table 1 provides the list and the definitions of independent variables, which are defined in line with previous studies on equity crowdfunding (e.g., Ahlers et al., 2015; Vismara, 2016). *Age* is the proponent venture's age (in months). *Positive\_Sales* is a dummy variable equal to 1 if the venture has already reported positive sales. We control the venture's size (*Total\_Assets*), measured as the natural logarithm of one plus the startup's total assets. Total assets refer to the value of the balance sheet the year before the offering, expressed in millions of British pounds. Regarding the structure of the offer, the target amount of capital to be raised (*Funding\_Goal*) and the relative percentage of equity offered to investors (*Equity\_Offered*) in each offering are measured as by Ahlers et al. (2015). Projects can qualify for tax incentives according to the United Kingdom Seed Enterprise Investment Scheme SEIS, which is designed to encourage seed investment in early-stage companies with up to £150,000 capital raised (*Tax\_Incentives*). Finally, we control for the industry starting from Crowdcube and Seedrs classification.

*Insert Table 1 Here*

#### 4.6. Endogeneity

Our econometric approach uses two outcome variables, namely Short-term outcome and Long-term outcome. Both these dependent variables are measured after the definition of the text of the online offerings, on which the sustainability orientation is assessed. Hence, the dependent variables are measured at the end of the campaigns, while our explanatory and control variables are measured at the launch of the campaigns, with no temporal overlap. However, the temporal

condition is not sufficient to determine causality, which requires that no other causes should eliminate the relation between the variables. We address this issue by conducting a Durbin-Wu-Hausman endogeneity test, using a mimicking variable as the instrumental variable. A good instrumental variable should be highly correlated with the potentially endogenous variable (sustainability orientation, in this context) but not directly correlated with the dependent variable (Short-term outcome and Long-term outcome).

Mimicking variables are defined as the reference variable (i.e. sustainability orientation) and measured for each venture as the average of all equity offerings in the same industry in the previous year. Mimicking is a common behavior to achieve legitimacy (Deepphouse and Carter, 2005), and is used in finance studies in initial public offerings (Bertoni et al., 2014) as well as crowdfunding (e.g., Cumming et al., 2019; Vismara, 2019). Mimicking variables are, by definition, fully exogenous. In this case, the mimicking variable of sustainability orientation is also likely to be excludable, given that investment decisions in an offering are unlikely, based on the sustainability orientation of previous offerings. Therefore, the frequency of offerings by SOVs preceding each offering is a suitable instrumental variable in this study. The Durbin-Wu-Hausman test (Hausman, 1978) failed to refute the null hypothesis, indicating that endogeneity should not be a concern in this study.

The attention to sustainability factors has increased over time (Cumming et al., 2024). This means that more recent equity crowdfunding offerings are more likely to be identified as SOVs. Since mimicking variables are measured for each venture as the average of all equity offerings in the same industry in the previous year, their inclusion alleviates the concerns about the potential effect of time trends on the relationship between sustainability orientation and the outcome of equity crowdfunding offerings.

#### *4.7. Models*

Our analysis first examines whether sustainability orientation affects the likelihood of success for crowdfunding offerings (Short-term outcome). Concerns about the potential endogeneity between a sustainability orientation and the outcome of crowdfunding offerings are determined by the possibility that these two variables can be jointly affected by the firm's unobserved characteristics, which may result in spurious correlations (Hermalin and Weisbach, 2001). We address this issue by employing an instrumental variable approach, using a two-stage least squares (2SLS) regression. In the first stage, sustainability orientation is instrumented by using the Mimicking Behavior variable, as explained above. In the second stage, we employ probit regressions with Short-term outcome as the dependent variable. The regression models include a set of control variables as defined above. Industry fixed effects are finally included with a set of dummy variables.

After modeling the determinants of the success of the offerings, our analysis focuses on post-offering outcomes, identifying cases of long-run success and firm failure as possible outcomes. In our framework, older campaigns are observed for a longer time compared to more recent offerings. This diversity is taken into account using a competing risks proportional hazard duration model (Fine and Gray, 1999), fitted using the maximum likelihood approach. This approach allowed us to determine the hazard rate for the post-offering outcome scenario of interest in the presence of other possible competing scenarios, namely Failures and Successful. Ventures that do not belong to any of these two categories correspond to the right-censored observations. The time to the occurrence of the event is measured in months from the closing date of the initial equity crowdfunding offering. To study post-offering outcomes, we implement a competing risk model



using the full sample of 534 successful and unsuccessful offerings. We use the same set of control variables as used in the short-term analysis, with the addition of the Short-term Outcome variable as a regressor. We indeed expect that being successful or not in the equity crowdfunding offering will affect the future prospects of the ventures.

## 5. RESULTS

### *5.1. Univariate analysis*

Table 2 reports the descriptive statistics for the sample of 534 ECF offerings. The univariate analysis shows that ventures that successfully secure funding in their initial ECF offerings are more likely in the long run to further raise capital in follow-on rounds and are less likely to fail. In line with previous studies (e.g., Ahlers et al., 2015), successful ventures are on average more mature and with a consolidated track record of positive sales. In line with previous studies (Vismara, 2016), the relative amount of equity offered is a signal of commitment toward the venture: by retaining more ownership, founders convey a positive signal to crowd investors. SOVs are not statistically different from other ventures in terms of the probability of short-term success. They are more likely to opt for a nominee structure and are on average younger than other ventures. Last, the average offering with a nominee structure is characterized by a lower fraction of equity offered, relative to direct ownership offerings.

*Insert Table 2 Here*

A correlation matrix among all the independent variables is shown in Table 3. The variance inflation factors (VIFs) associated with each model specification all fall well below the acceptable threshold of 10, indicating multicollinearity is not a concern.

*Insert Table 3 Here*

### *5.2. Short-term outcome*

Table 4 reports the results of testing the drivers of short-term performance (campaign success). Unsurprisingly, the main control variables that were found to be relevant in prior research are significant and carry the expected signs. Namely, positive sales have a strongly positive impact on campaign success, whereas the proportion of equity offered is negatively related to campaign success. This was expected since the proportion of equity retained by the entrepreneur signals his confidence in his venture's prospects and future performance because he puts a relatively large proportion of his wealth at stake.

Sustainability orientation by itself does not increase the chance of success of equity crowdfunding offerings (Model 4 of Table 4). This was also expected, since, although highly valued for ethical reasons and because of its potentially positive impact on future cash flows, young ventures face extreme information asymmetry. Hence statements of sustainability orientation could be mere cheap talk. However, when a signal is sent concerning effective corporate governance designed to contain moral hazard by granting crowd investors effective control over entrepreneurs' ethical behavior and respect for their sustainability engagement, things change. The results of Model 5 of Table 4 are consistent with Hypothesis 1, which predicted a positive influence of sustainability orientation on campaign success if and only if it is combined with the nominee ownership structure.

Sustainability orientation matters when crowdfunding investors can collectively influence the firms' decisions. With effective governance in place, sustainability orientation becomes a credible signal to investors. Chances of succeeding an ECF campaign actually rise by more than 20% for SOVs with a nominee ownership structure, when compared to simply commercially oriented ventures without specific sustainability engagements. This result is significant at the 5% level.

*Insert Table 4 Here*

### *5.3. Long-term outcome*

Table 5 reports the results on how sustainability orientation relates to the post-offering outcomes. First, when checking control variables, we observe, once again, a strongly positive impact of positive sales on performance, this time measured over a long-time horizon. The result is highly significant at the 1% level. Positive sales are also negatively related to failure.

Consistent with Hypothesis 2, the success of the initial offerings matters, as successful offerings are more likely to achieve long-term success and less likely to fail. Both results are consistently significant at the 1% level (Models 1-8). Initial campaign success reduces information asymmetry for follow-on investors by starting to create a positive track record. This increases the odds of raising additional funds.

Sustainability orientation does not play a significant role in general, but it is significant for successful offerings: When SOVs successfully raise funds in an initial equity crowdfunding offering, they are more likely to raise further follow-on financing. This result is highly significant at the 1% level (Model 7) and supportive of Hypothesis 3. Remarkably, the economic impact of

interacting previous success with sustainability orientation is even stronger than for previous success taken by itself. So clearly, sustainability orientation strongly matters for long-run success. It is also remarkable that, over the long run, the signal related to the nominee structure seems to fade. While it was significant in the explanation of short-term success, it lost its significance over the long run (Models 7 and 8). There may be several reasons for this. Hypothesis 1 is based on the assumption that effective governance acts as a positive signal when information asymmetry is strong. Long-term success is measured after an initial offering. Consequently, the firm has already acquired a track record at that point, and information asymmetry decreases.

*Insert Table 5 Here*

## **6. DISCUSSION**

We make at least two significant contributions to the equity crowdfunding literature. First, we document that sustainability orientation has a positive impact on (short-term) campaign success, but only when it is combined with corporate governance mechanisms. Investors in equity capital logically base their investment decisions on the prospects of future cash flows. We observe a positive impact of sustainability orientation on ECF-campaign success, which hence implies that investors see potential in green strategy to strengthen future cash flows (or, more generally, to enhance their personal utility, even beyond future cash flows, through perceived ethical benefits for example). But in a situation of strong information asymmetry, there is strong uncertainty concerning the materiality of green strategy beyond mere discourse. Hence, effective corporate governance acts as a positive signal, which reduces information asymmetry. Sustainability orientation alone is not sufficient to heighten the chances of campaign success of SOVs when

compared to other ventures. Prior research has shown that the nominee structure acts as an effective governance mechanism in the pursuit of lowering agency costs (Butticè et al., 2020; Coakley et al., 2022a). Setting up a nominee structure in an ECF campaign can thus be considered a positive signal for future investors. It enhances the credibility of sustainability orientation. Our results show that the corporate governance signal makes the difference. Beyond the impact of sustainability orientation on short-term crowdfunding success, our findings are thus consistent with recent research on the importance of corporate governance in equity crowdfunding more generally. Cumming et al. (2019) are actually the first to examine the impact of the separation of ownership and control on an equity crowdfunding platform. Such an ownership structure creates naturally a situation where information asymmetry is strong, and corporate governance mechanisms reduce the risks concerning the prospects of future cash flows. To the best of our knowledge, we are the very first to highlight the role of governance in the success of sustainability-oriented entrepreneurial strategies.

Second, we demonstrate that most ventures that are successful in an equity crowdfunding campaign, when they have a sustainability orientation, are also economically sustainable over the long run, as they manage to attract additional resources (follow-on funding). This is consistent with prior research which has shown that ECF-campaign success is a strong driver of long-run performance in general. Our results show that sustainability orientation makes this effect even stronger. It adds explanatory power.

Today there is much debate about the materiality of green corporate strategies vs. simple greenwashing. Our results indicate that crowd investors who value sustainability do not naively trust self-declarative statements about green business, nor do they simply want to express their attitude in vocal statements (voice only), but they seek effective influence in governance (the

nominee structure) as a way to control materiality. This means that effective corporate governance is important for success in sustainable entrepreneurship. In other words, sustainability has become an important ethical standard, but its effective implementation and impact on firm success depend on the corporate governance mechanisms.

We demonstrate that ethics pay off in equity crowdfunding of SOVs, but only if the sustainability discourse is backed by signaling the existence of appropriate governance mechanisms. This is especially true for short-term success. Once proved successful in an initial campaign, ECF-backed firms are also high performers over the long run, more so if they feature a sustainability orientation. The governance signal loses however its strength over the long run. That is hardly surprising since signals have the most value when information asymmetry is strong. Over the long run, SOVs acquire a track record, and information asymmetry decreases. Short-term performance, which is itself enhanced by governance mechanisms, substitutes as a strong signal for follow-on investors.

These results have practical implications. We have demonstrated that equity crowdfunding can be an interesting tool in promoting ethical sustainability-oriented investment. ECF platforms can promote sustainability. But if they seek to do so over the long run, they have a strong interest in promoting the nominee ownership structure. By doing so, they could develop a reputation as effective gatekeepers for sustainability-oriented investments. Crowd investors who are interested in supporting sustainability should give priority to SOVs that adopt the nominee ownership structure for their crowdfunding campaign. This is instrumental in selecting only those ventures where it can be expected that the entrepreneurs will eventually live up to their self-declared ethical standards. Once an SOV successfully completes a crowdfunding campaign, it has also a strong probability of being a high performer over the long run. Hence crowd investors who wish to

support environmental sustainability during crowdfunding campaigns have high chances to also reap long-run economic benefits from the ethical orientation of their investment.

Of course, our research has also limitations. We worked on a sample of ECF campaigns exclusively drawn from UK-based platforms. There is no guarantee that the results can be extended to other national contexts, provided that national business culture may have a bearing on the appreciation of initiatives related to sustainability. It is not certain that the crowd reacts in the same way to sustainability everywhere. Hence, future research may benefit from extending our work to different national contexts. However, the exclusive focus on the UK has the advantage that this ECF market is the best developed and one of the most active in the world, which guarantees a high degree of reliability of our data and results.

## **CONCLUSION**

In conclusion, we observe a significantly positive impact of sustainability orientation on the short-term performance of ECF-backed ventures, but only when the offering comprises a nominee ownership structure. Hence, corporate governance plays a central role in the success of sustainability-oriented ECF campaigns. In successful campaigns, sustainability orientation also significantly increases the chances of long-run performance. This is an interesting contribution to research on the link between sustainability and finance, where most of the research to date has been done on large stock-listed corporations. We are among the first to contribute to this stream of research from the perspective of entrepreneurial finance in an ECF setting, and the very first to look simultaneously at short-term and long-run performance. We also show that the appropriate governance structure is important for SOVs to take the first hurdle on the path towards economic sustainability. This has implications for business ethics. In the context of equity crowdfunding, we

show that sustainability carries ethical and economic value, provided that ethical crowd investors are granted leverage through effective corporate governance mechanisms.



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**Table 1. Variables Definition.**

Variable	Definition
Short-term Outcome	Dummy=1 if the equity crowdfunding offering is successful; 0 otherwise
Long-term Outcome - Failure	Dummy=1 if the venture is insolvent, liquidated, or dissolved following the offering
Long-term Outcome - Successful	Dummy=1 if the venture attracts further equity financing after the initial offerings or delivers an exit opportunity in the form of IPO or M&A
Sustainability_Oriented	Dummy=1 if the campaign is Sustainability-Oriented (see details on identification in Section 4.2); 0 otherwise
Nominee	Dummy=1 if the offering is with a nominee structure; 0 if with direct ownership
Age	Age of the venture at the moment of the offering (years)
Positive_Sales	Dummy=1 if the venture has already reported positive sales; 0 otherwise
Total_Assets	Natural logarithm of one plus the total assets of the venture
Funding_Goal	Target capital to be raised (000£)
Equity_Offered	Percentage of equity offered
Tax_Incentives	Dummy=1 if the Seed Enterprise Investment Scheme (SEIS) tax relief is available for investors; 0 otherwise

**Table 2. Descriptive statistics.** This table reports the average values for the sample of 534 equity offerings. The tests compare successful vs unsuccessful offerings, Sustainability-Oriented vs non Sustainability-Oriented ventures and nominee vs direct ownership offerings. The significance levels are based on t-statistics (difference between successful vs. unsuccessful offerings, between SOVs vs. non SOVs, and between nominee vs. direct ownership structures). Statistical significance levels are at 1% (\*\*\*), 5% (\*\*), or 10% (\*).

	Sample	Successful	Unsuccessful	SOV	Non-SOV	Nominee	Direct
Short-term Outcome	0,545	1,000 ***	0,000	0,526	0,550	0,556	0,533
Long-term Outcome - Failure	0,247	0,144 ***	0,371	0,193	0,262	0,242	0,253
Long-term Outcome - Successful	0,251	0,368 ***	0,111	0,237	0,255	0,285 *	0,214
Sustainability-Oriented	0,213	0,206	0,222	1,000 ***	0,000	0,253 **	0,171
Nominee	0,519	0,556	0,474	0,614 **	0,493	1,000 ***	0,000
Age	3,160	3,520 ***	2,729	2,613 ***	3,308	2,912	3,427
Positive_Sales	0,530	0,629 ***	0,411	0,456 *	0,550	0,520	0,541
Total_Assets	4,977	5,152 **	4,767	4,882	5,003	4,806	5,161
Funding_Goal	305	318 *	289	311	303	321	288
Equity_Offered	12,670	11,390 ***	14,203	12,309	12,768	11,782 ***	13,627
Tax_Incentives	0,438	0,412	0,470	0,421	0,443	0,412	0,467
No. Obs	534	291	243	114	420	277	257

**Table 3. Correlation matrix.** A star indicates a significance level of 1%. See Table 1 for the definition of the variables.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1) Sustainability-Oriented	1									
(2) Nominee	0.06	1								
(3) Age	-0.14*	-0.04	1							
(4) Positive_Sales	-0.06	-0.03	0.28*	1						
(5) Total_Assets	-0.05	-0.04	0.41*	0.37*	1					
(6) Funding_Goal	0.01	0.08	0.23*	0.33*	0.05	1				
(7) Equity offered	-0.06	-0.14*	-0.08*	-0.07	0.11*	0.04	1			
(8) Tax_Incentives	-0.07	-0.07	-0.09*	-0.23*	-0.29*	-0.05	-0.03	1		
(9) Short-term Outcome	-0.0	0.02	-0.07	0.31*	0.06	-0.05	-0.09*	0.02	1	
(10) Failure	-0.06	-0.05	-0.07	-0.04	-0.14*	0.13*	-0.02	0.10*	-0.24*	1
(11) Success	-0.05	0.09	0.03	0.19*	0.07	0.08	-0.09*	-0.06	0.29*	-

**Table 4. Short-term performance.** Two-stage Probit using sustainability orientation as dependent variable in the first stage (Model 1) and the success dummy Short-term Outcome as dependent variable in the second stage (Models 2 to 5). In the second stage, Sustainability orientation is instrumented with the mimicking variable. Model 2 includes the variables in our baseline specification. The Nominee dummy is added in Model 3, the Sustainability-Oriented in Model 4, and their interaction in the full Model 5. The variable definitions are in Table 1. Coefficients of industry effects are omitted for readability. Heteroscedasticity-robust standard errors are reported in parentheses. \*\*\*, \*\*, \* represent, respectively, significance levels below 1%, 5%, 10%.

	(1)	(2)	(3)	(4)	(5)
	Sustainability orientation	Short-term Outcome	Short-term Outcome	Short-term Outcome	Short-term Outcome
Sustainability-Oriented	-	-	-	0.312 (0.214)	0.125 (0.220)
Sustainability-Oriented x Nominee	-	-	-	-	0.220** (0.087)
Nominee	0.006 (0.017)	-	0.912** (0.446)	0.767* (0.411)	0.260 (0.172)
Age	-0.268*** (0.078)	-0.267* (0.148)	-0.269* (0.147)	-0.143 (0.101)	-0.121 (0.104)
Positive_Sales	-0.373* (0.212)	1.211*** (0.246)	1.226*** (0.260)	1.600*** (0.325)	1.598*** (0.401)
Total_Assets	-0.266 (0.259)	0.040 (0.081)	0.035 (0.081)	0.041 (0.078)	0.038 (0.077)
Funding_Goal	0.391 (0.405)	-0.085 (0.213)	-0.068 (0.152)	-0.120 (0.152)	-0.120 (0.145)
Equity_Offered	-0.246 (0.260)	-1.934** (0.893)	-1.826* (0.939)	-1.320* (0.693)	-1.462** (0.714)
Tax_Incentives	-0.035 (0.026)	0.284 (0.452)	0.038 (0.075)	0.040 (0.081)	0.035 (0.081)
Mimicking	1.077*** (0.114)	-	-	-	-
Constant	-0.031 (0.079)	12.786*** (1.235)	14.877*** (1.343)	13.427*** (1.477)	12.421*** (1.567)
Pseudo R <sup>2</sup>	0.12	0.30	0.33	0.42	0.37

**Table 5. Long-term performance.** Competing risks regression on long-term performance, with three possible outcomes, i.e., Success (odd-numbered Models), Failure (even-numbered Models), and active ventures being the baseline outcome. Models 1 and 2 include the variables in our baseline specification, the Nominee dummy and the Short-term Outcome as independent variables. The Sustainability-Oriented is added in Models 3 and 4, and their interaction in Models 5 and 6. In Models 7 and 8, it is included an interaction between Short-term Outcome and Sustainability-Oriented. The variable definitions are in Table 1. Coefficients of industry effects are omitted for readability. Heteroscedasticity-robust standard errors are reported in parentheses. \*\*\*, \*\*, \* represent, respectively, significance levels below 1%, 5%, 10%.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Success	Failure	Success	Failure	Success	Failure	Success	Failure
Short-term Outcome	0.752*** (0.154)	-0.435*** (-0.116)	0.747*** (0.149)	-0.439*** (-0.121)	0.762*** (0.158)	-0.440*** (-0.124)	0.567*** (0.190)	-0.421*** (-0.117)
Short-term Outcome x Sustainability-Oriented	-	-	-	-	-	-	0.866*** (0.319)	0.364* (0.204)
Sustainability-Oriented	-	-	0.214* (0.126)	0.148 (0.217)	0.166 (0.101)	0.078 (0.202)	-0.018 (-0.026)	0.052 (0.184)
Sustainability-Orientedx Nominee	-	-	-	-	0.256* (0.150)	0.008 (0.012)	0.188 (0.162)	0.009 (0.008)
Nominee	0.057** (0.023)	-0.132 (-0.724)	0.044* (0.025)	-0.125 (-0.684)	0.036* (0.021)	-0.106 (-0.627)	0.028 (0.036)	-0.084 (-0.551)
Age	-0.233 (-0.147)	0.194 (0.188)	-0.232 (-0.145)	0.191 (0.193)	-0.231 (-0.147)	0.189 (0.190)	-0.238 (-0.147)	0.190 (0.189)
Positive_Sales	0.790** (0.308)	-0.954** (-0.472)	0.841** (0.327)	-0.968** (-0.475)	0.856*** (0.314)	-0.965** (-0.469)	0.848*** (0.310)	-0.896* (-0.469)
Total_Assets	1.332 (1.081)	-0.073 (-0.121)	1.288 (1.054)	0.122 (0.228)	1.221 (1.043)	-0.107 (-0.190)	1.353 (1.093)	0.098 (0.154)
Funding_Goal	0.202 (0.125)	-0.360 (-1.220)	0.267* (0.147)	-0.390 (-1.140)	0.208* (0.124)	-0.400 (-1.300)	0.192 (0.118)	-0.350 (-1.210)
Equity_Offered	-0.017 (-0.016)	-0.015 (-0.020)	-0.020 (-0.019)	-0.011 (-0.016)	-0.017 (-0.018)	-0.009 (-0.014)	-0.016 (-0.018)	-0.010 (-0.015)
Tax_Incentives	0.346* (0.201)	-0.570 (-0.439)	0.392 (0.243)	-0.559 (-0.448)	0.355 (0.245)	-0.681 (-0.671)	0.361 (0.223)	-0.614 (-0.474)
Wald Chi-squared	729.6	52.9	765.1	52.7	925.2	66.5	935.0	87.3

**Figure 1.** Relative importance of sustainability keywords for the identification of 114 sustainability-oriented ventures (SOVs).

