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Determinants of Overfunding in Equity Crowdfunding: An Empirical Study in the UK and Spain

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Abstract: Crowdfunding constitutes one of the financial solutions to achieve the sustainable development goals, by fostering innovation and economic growth. This paper conducts an empirical two-country analysis (the UK and Spain) of characteristics of successful offerings to assess the distribution of overfunding in equity crowdfunding. Unlike previous research, which has usually comprised campaigns posted on single-country portals, our study is based on an international leading platform operating with country-differentiated websites, Crowdcube. Such an approach allows us to identify influential factors which are dependent on country and, simultaneously, to control for those platform-related factors. To focus on the overfunding distribution, a quantile regression methodology is adopted for a total sample of 299 overfunded campaigns from 2015 to 2018. Overall, empirical results show that the effects of key campaign features (equity, voting rights and social capital) are stronger and more significant at the 75th and 90th quantiles for the overfunding level and the number of investors. Furthermore, we find significant differences across countries, which persist along the distributions of overfunding. Yet, interestingly, between-country differences in overfunding level vanish for the technological sector. Our research provides further insights into the relation between equity crowdfunding and sustainable finance.

Keywords: equity crowdfunding; overfunding; sustainable finance; United Kingdom; Spain

1. Introduction

The landscape of entrepreneurial finance has considerably changed over the last years (Block et al. [1]). As a result of the severe shrinking of public and private funding, Crowdfunding has emerged as an innovative sustainable financing model mainly used by small and micro-enterprises to raise funds from the crowd around the world, via an online platform (Ahlers et al. [2]). Nowadays, crowdfunding is recognised as an instrument of debt and equity to achieve the United Nations sustainable development goals. The crowdfunding platforms promote financing efficiency by scaling up the mobilisation of private capital towards innovation investments in a digital market (Sorenson et al. [3]). In equity-based crowdfunding, at the forefront of the market demand are early-stage and more mature ventures which search for financing for their businesses. The promoters or founders of projects set a target amount and make an open call to sell a specific amount of equity or bond-like shares in their company. On the market supply side, funders make their investment decisions according to public information related to risk and profitability prospects. Unlike in other forms of crowdfunding like donation and reward, where backers mainly search for non-financial

interests, in equity crowdfunding the main motivation of investors is to participate in the cash flows or profits of the firms (Cholakova and Clarysse [4], Kleinert and Volkmann [5]). (See Busse et al. [6] for an overview of current literature on crowdfunding.)

In this paper, we focus on the projects which successfully surpass the fundraising goal stipulated by fundraisers in equity crowdfunding, that is, overfunding. The equity-based model is noted as the less-researched type of crowdfunding (De Crescenzo et al. [7]). In leading equity crowdfunding platforms, empirical evidence reveals that for a large stake of successfully funded projects the raised amount only slightly exceeds the funding target. However, there is a limited, but non-negligible, number of campaigns exhibiting great levels of overfunding, which makes them highly interesting to investigate. Our main objective is to assess how the characteristics of successful projects determine the right-skewed distribution of funds raised beyond the originally targeted amount.

Despite the growing literature on crowdfunding in the last years (Mollick [8], Vulkan et al. [9], Vismara [10,11], Agrawal et al. [12], Cumming et al. [13], among others), there is a paucity of studies which have examined overfunding. Some examples are Koch [14], Cordova et al. [15], Adamska-Mieruszewska et al. [16] in reward-based fundraising, and Xiaoyu et al. [17], Li et al. [18] in equity crowdfunding. The study of overfunding is particularly important in equity crowdfunding due to the high risk level assumed by (non-professional) investors and the lack of liquidity for shares in secondary markets. In this vein, our research provides support for the connection between financial risk management and sustainable finance.

Sustainability of financial system requires an optimal allocation of scarce monetary resources among investment alternatives. In crowdfunding markets, overfunding may become a primary source of market inefficiency which promotes suboptimal allocation of resources towards highly visible campaigns (Li et al. [18]). Many promising start-ups in equity crowdfunding cannot attain their funding goal because they are overshadowed by their overly successful counterparts, and they are deprived of much needed monetary resources. Furthermore, the detrimental effects of overfunding may impact on fundraisers, platform providers and funders. First, for fundraisers, overfunding could pose a threat because windfall-like capital surplus may induce overconfidence and spur founders to take on unnecessary risks. This may lead to breach of their contractual obligations with investors (moral hazard problems Jensen and Meckling [19]). Second, for platforms, the suboptimal allocation of resources may cause an adverse selection problem to assess the quality of prospective investments. This problem may in turn reduce equity platforms to a "market for lemmons" (Akerlof [20]). Last, for funders, their shareholdings and control may be diluted as a result of additional equity. This not only shrinks the dividends paid to funders, but it may also reduce their voting rights due to an increased number of shareholders. Therefore, if the campaign target is budgeted according to a business plan and financial assessment, there are no a priori economic reasons for raising more money beyond the original target because additional costs arise. Otherwise, founders could strategically solicit a fundraising goal lower than that being budgeted if they expect the uncertainty level to be reduced once the threshold amount is achieved and, thereby, more investors will be attracted by the project.

In addition, to the best of our knowledge, little research has examined crowdfunding from a cross-country perspective. Most works are based on leading online platforms operating in one country, rarely devoted to explore country-specific factors. Literature has widely studied geographical effects related to the entrepreneur–investor relationship: the distance between entrepreneurs and funders, or distinction between home investors and overseas investors (Agrawal et al. [12], Cordova et al. [15]). On the contrary, our research is a first attempt to study whether differences in overfunding exist between two countries—the UK and Spain—when these countries share the same fundraising rules defined by the leading European equity crowdfunding platform, Crowdcube.

Therefore, our research offers two main contributions to the literature on overfunding in equity crowdfunding: First, we study the main drivers for the distribution of overfunding using quantile regression (QR) techniques. By applying QR models, factors which promote or inhibit funds beyond the predefined target can be identified. In fact, the sign and intensity of their effects will substantially

depend on the quantiles of the overfunding distribution. Second, a two-country examination of determinants of overfunding is provided. Our data set comprises 299 overfunded projects in total launched between 2015 and 2018 on Crowdcube, through two country websites in the UK and Spain. This unique sample is particularly suitable because it allows to control for platform-specific factors such as platform reputation, duration of campaign, disclosure of information, etc. Therefore, we investigate whether the implementation of a common platform framework helps projects from both countries to achieve comparable levels of overfunding (regardless of the country website) or, by contrast, there exist distinctive overfunding patterns. The two countries differ considerably from each other in the development of legislation and institutional issues supporting equity crowdfunding. A two-country study may shed light on unique as well as common elements of equity crowdfunding markets.

To the best of our knowledge, this is the first two-country study aimed at analysing the effects of campaign features along the distribution of overfunding in equity crowdfunding projects. In particular, we are interested in three key features: equity offered, type of shares and social capital. We anticipate that equity offered and issuance of shares with voting rights will have a negative impact on the overfunding rate, while social capital will affect it positively. Besides, the country-specific factor is expected to be markedly relevant to explain the success in overfunding.

As expected, the empirical results show significant effects of the key campaign determinants for large values of the overfunding level and the number of investors. The higher overfunding level observed in the UK projects can be mainly determined by the quality signalling roles of equity and voting rights, and by the informative role of social capital. For Spain, on the contrary, we only find significant effects of voting rights on the overfunding level. However, it is worth mentioning that the technological sector, which represents 50% of the Spanish projects, stands out as one of the industries which significantly achieves higher overfunding. Furthermore, if we consider only technology-related campaigns, we do not find significant differences in the overfunding level across countries. These results suggest that equity crowdfunding may promote sustainable development by mitigating geographical inequalities in innovation and technological progress.

The remainder of the paper is organised as follows. Section 2 presents related literature and research hypotheses. Section 3 describes the empirical method (sample, variables and econometric model) and outlines the main results. Finally, Section 4 concludes.

2. Literature Review

Two distinct features define the investment conditions under which investors provide funds to entrepreneurs in equity crowdfunding markets: (1) a high level of uncertainty about quality and prospects on future returns of companies, which considerably increase the risk level assumed by investors, and (2) information asymmetries between companies and crowd investors (Kleinert and Volkmann [5]). Therefore, information provided by companies to investors plays a crucial role for the success of fundraising campaigns (Ahlers et al. [2], Vulkan et al. [9], Vismara [10], Moritz et al. [21], Ralcheva and Roosenboom [22]). In this regard, one of the main interests of platforms should be the implementation of effective communication mechanisms to (i) disclose investors informative signals reducing perceived risk, and (ii) facilitate information sharing among the different types of investors (crowd, professional, experienced, etc.) through social networks. Platforms are responsible for disclosing credible information about the potentiality of projects. Recent works point out the importance of behavioural determinants in equity crowdfunding (Wasiuzzaman et al. [23], Troise et al. [24]).

In the context of overfunding, few studies have examined the main drivers for raising funds beyond the predefined target. During the overfunding stage of a campaign, information conditions may have changed with respect to those observed at the start of the crowdfunding campaign. Reaching the target could mean that the project has proven to have good quality and a high enough number of investors have trusted in it. As a result, additional investors are likely to face less risk and information asymmetries to undertake their investments. In reward-based crowdfunding projects, empirical

evidence shows that some factors promote overfunding, like project description, availability of videos and images, the number of reward pledges, duration of campaign, and social communication or the proponents' previous experience, while other factors, like the funding goal, are negatively correlated with overfunding (Koch [14], Cordova et al. [15], Adamska-Mieruszewska et al. [16]). Recently, some theoretical models have been proposed to explain overfunding behaviour in reward crowdfunding (Du et al. [25]). As far as we are concerned, Xiaoyu et al. [17] and Li et al. [18] are the only studies focused on overfunding in equity-based crowdfunding. As we will show, factors such as equity offering and social behaviour seem to be important drivers for projects to be overfunded. Our paper extends this line of research by analysing the effects of campaign characteristics on the distribution of overfunding, rather than mean effects, and by assessing differential overfunding patterns across countries.

Based on previous research on equity crowdfunding and overfunding, we posit our hypotheses regarding the impact of three key factors related to founders' behaviour: *equity* offered, issuance of shares with *voting rights* and *social capital*. Besides, we study whether the country factor is relevant in the overfunding success by controlling for the website on which campaigns are launched.

2.1. Equity

Equity, defined as the percentage of ownership initially offered by founders, can be considered as a proxy for company risk. Empirical research provides strong support for the signalling role of equity as project's quality (Ahlers et al. [2], Vulkan et al. [9], Vismara [10], Cumming et al. [13]). Investors interpret such information as founders' commitment for ownership retention. A lower percentage of equity may reveal a higher confidence of founders on their own project and, thereby, positive prospects on returns and cash flows in the future. Evidence shows a negative association between equity offered and the likelihood of achieving the targeted amount. We extend this research by arguing that this signal also plays a key role in the setting of overfunding (Vismara [10], Xiaoyu et al. [17]). Moreover, following a quantile regression approach, we posit that the signalling role of equity as project quality will be stronger for the most successful projects. That is, the negative effect will increase monotonically in the quantile of the distribution of project's overfunding success.

Hypothesis 1 (H1). *A larger percentage of equity offered will reduce the overfunding success of equity crowdfunding campaigns. The negative effect will be stronger for the projects positioned in the highest levels of the overfunding distribution.*

2.2. Voting Rights

Overfunding implies that founders voluntarily decide to offer additional equity beyond the originally targeted amount to absorb the excess of investors' funds. Therefore, at the end of the successful campaign, the total capital of the company will be allocated to a higher number of shareholders. The Crowdcube platform allows founders to sell different types of shares depending on whether they provide voting rights or not.

Although spreading the risk through a higher number of shareholders may be an advantage, research has found a negative impact of the share offering with voting rights on crowdfunding success. Professional investors perceive negatively a higher percentage of shares with voting rights because it anticipates the participation of more non-professional investors in the company performance. In particular, Cumming et al. [13] find that a high separation between ownership and control negatively affects the probability of success of the campaign. We extend this result to the overfunding context and put forward that the negative effects of voting rights on overfunding will be more noticeable for the most successful projects.

Hypothesis 2 (H2). *Offering only shares with voting rights will reduce the overfunding success of equity crowdfunding campaigns. The negative effect will be stronger for the projects positioned in the highest levels of the overfunding distribution.*

2.3. Social Capital

Numerous studies have pointed out that social capital is essential in crowdfunding markets. The ability of a project's promoters to attract and mobilise potential funders through social networks is determinant for the campaign success. Investors can sometimes track campaigns by social networks or obtain information from the board through their web-based networks. The technological advance allows investors to be more informed and companies to have greater facilities to offer the news of the campaign. Those founders who decide to use the social networks will reduce the uncertainty of current and potential investors. In reward-based crowdfunding, the positive effect of social capital is widely documented (Mollick [8], Agrawal et al. [12], Colombo et al. [26], Skirnevskiy et al. [27], Zheng et al. [28]). In equity crowdfunding campaigns, social capital also helps to achieve the predefined target, particularly updates posted by founders on the crowdfunding platform to mitigate investors' perceived risk (see, for example, in Ralcheva and Roosenboom [22], Rossi and Vismara [29], Hornuf and Schwienbacher [30], Block et al. [31]).

In the context of overfunding, Li et al. [18] identify herding behaviour as a salient driver for overfunding in equity crowdfunding campaigns.

In this research, we measure social capital as the number of networks that founders use to communicate with their potential investors. In particular, we consider external networks, like Facebook, twitter or Instagram, as well as the internal network provided by Crowdcube.

Hypothesis 3 (H3). *A higher number of social networks will increase the overfunding success of equity crowdfunding campaigns. The positive effect will be stronger for the projects positioned in the highest levels of the overfunding distribution.*

2.4. Country

Last, we examine the country-related effects. Prior research has mainly focused on the role of geographical distance between fundraisers and funders through online platforms. The crowdfunding platforms seem to diminish many distance-related frictions. For instance, Mollick [8] analysed campaigns posted on the greatest US reward-based platform, Kickstarter; Agrawal et al. [12] examined data from the first significant crowdfunding platform that connects artists with funders, Sellaband; Hornuf and Neuenkirch [32] studied projects launched on the German equity crowdfunding platform, Innovestment.

Despite the mitigating effects of geography on crowdfunding pointed by previous literature, some serious restrictions to development of this alternative financing may remain. A great variety of factors associated with the country (cultural, social, legislative or economic) may influence crowdfunding markets (Vismara [10], Zheng et al. [28], Hornuf and Schwienbacher [30], Bruton et al. [33]). For instance, regulatory frameworks with excessive protection to investors may encourage funders to search for alternative investment opportunities in less-strict countries. In fact, there is a geographically unbalanced development of crowdfunding within the UE mainly due to the lack of harmonisation in the regulation (European Commission [34]).

Our study allows to distinguish investment projects launched on the UK Crowdcube website from investment projects posted on the Spain Crowdcube website. Statistics show that crowdfunding patterns observed in each country are quite different from each other. According to Ziegler et al. [35], in the EU the volume of the alternative financing market reached 10.44 billion euros in 2017, with 7.07 billion euros corresponding to the UK. In the case of Spain, a total amount of 160.48 million euros was raised. By comparison, the UK is by far the European leading country in crowdfunding, while Spain is among the EU countries where this fundraising model is quickly growing in the last years (Borrero-Domínguez et al. [36]). Therefore, we anticipate a greater overfunding success in the equity crowdfunding campaigns of the UK compared to those of Spain.

Hypothesis 4 (H4). *Overfunding success will be higher in the UK than in Spain. These differences will be more salient in the highest levels of the overfunding distribution.*

3. Method and Results

3.1. Empirical Method: Sample, Variables and Econometric Model

This research examines data from Crowdcube, the largest operating equity crowdfunding platform in the UK. According to the latest data announced on the Crowdcube platform for 2018, 52.6% of total financing raised in equity crowdfunding in the UK has been through Crowdcube, followed by Seedrs with 30.9% and SyndicateRoom with 16.6%. (https://www.crowdcube.com/explore/blog/investing/crowdcube-raises-more-for-uk-businesses-than-any-other-equity-crowdfunding-platform) Crowdcube has managed to raise more than 600 million euros, of which 20 million correspond to Spanish companies in the period 2014–2018. (Crowdcube News: https://www.crowdcube.com/explore/crowdcube/20-million-euros-raised-for-spanish-businesses.) Based on the Spanish Association of FinTech & InsurTech (AEFI), of the 19 million euros of total investment raised in 2017 by equity crowdfunding platforms, 37% corresponds to Crowdcube. This platform is the leader in equity crowdfunding in Spain, jointly with SociosInversores and The Crowd Angel (González and Ramos [37]).

In our data set, the projects are listed according to the country-website on which they were posited in Crowdcube: `crowdcube.es` (Spain) or `crowdcube.com` (United Kingdom). Crowdcube establishes the same general rules governing fundraising campaigns in both websites. At the start of offerings, companies have to communicate the targeted amount to be raised and the percentage of equity they initially intend to sell. Besides, founders must provide detailed information about project description (video, pictures and social networks) and financial documents (business plan, financial forecasts and financial snapshots). At first, campaigns are privately announced so that close funders connected through fundraisers' social networks make their contributions. Only when a campaign reaches 20% of fundraising target, it is publicly launched with 30 days to complete the financing process. The crowdfunding scheme works in the "all-or-nothing" fashion, where the entrepreneur keeps nothing unless the goal is achieved. That is, individual pledges are aggregated via the platform until the end of fundraising campaign. If the funding threshold is reached, investors thus become direct shareholders in the companies. In contrast, if the campaign fails, all pledges are voided and money is returned to funders (Cumming et al. [38]). Last, Crowdcube provides fundraisers the opportunity to raise extra money beyond the target. If founders accept overfunding, they need to increase the initial equity offering.

We have hand-collected data of 344 equity crowdfunding campaigns posted on Crowdcube from September 2015 to July 2018, 289 pitches launched on the UK website (84%) and 55 (16%) on the Spain website. (At the date of data gathering, Crowdcube had two different websites, one for British projects and another for Spanish projects. In January 2019, the Spanish website was absorbed by the British one and, since then, all projects are jointly posited on the same website. Our data set contains offerings separately launched on each country website before such an integration process.) All projects correspond to successful equity crowdfunding offerings, that is, those campaigns which raise funds above the predefined funding goal. Because fundraisers can make their own choices on whether they accept surplus funds or not, we excluded just-funded campaigns to eliminate potential self-selection bias. (In our sample, 19 of 344 campaigns failed to reach the funding goal (14 of them in the UK) and 21 campaigns raised just the target (11 in the UK). We also eliminated 5 campaigns due to the lack of information for some of our key variables.) The final sample is made of 299 offerings with complete information (259 in the UK and 40 in Spain). These campaigns have raised a total amount of 146,656,488 euros and have involved 97,159 investors.

In the following, the variables used in our analysis will be depicted in italics. Overfunding success is measured as a dependent variable using either *Overfunding level* or # *investors* of the successful campaign. As key explanatory variables, we gather information about *Equity* offered to the investors, *Voting rights* and *Social capital*. Additionally, for each project, several control variables were considered: *Team size* and *Founders' education* (Barbi and Mattioli [39], Piva and Rossi-Lamastra [40]), *Tax incentives* (Vismara [10], Ralcheva and Roosenboom [22]) and *Industry*. For industry, we follow the Vismara [11]'s 8-category system based on Crowdcube classification. For the UK projects, as well, we collect data for two additional variables related to founders' prior experience: *Age of the company* and # *rounds* previously carried out by founders. Variable definitions and descriptive statistics are reported in Table 1. To study possible multicollinearity, variance inflated factor (VIF) and Spearman correlations have been calculated and summarised in Table A1 in Appendix A. Such results do not suggest an issue of multicollinearity.

On average, the overfunding levels found in previous studies are very close to our figure of 1.45 for the whole sample: in reward-based crowdfunding, Mollick [8] found that funded projects on Kickstarter achieve 1.5 times their goal, and in equity crowdfunding Vulkan et al. [9] found 1.38 in projects launched on SEEDRS. However, the average number of investors per campaign differs considerably. On average, we obtain 324 investors in our whole Crowdcube sample, while Mollick [8] and Vulkan et al. [9] find 122 and 158 investors, respectively, for funded projects. (In our initial sample of 344 projects (successful and unsuccessful), the average number of investors is 311. Mollick [8] finds 67 investors on Kickstarter and Vulkan et al. [9] obtain 71 on SEEDRS, on average for all projects.) Across countries, on average, the ratio of overfunding is higher in the UK than in Spain (1.47 vs. 1.29) and, similarly, projects in the UK attracts a higher number of investors compared to Spain (361.37 vs. 89.12).

Figure 1 depicts the distributions of overfunding level and # investors for the whole sample. Of particular note is the fact that both distributions are positively skewed, with a small minority of campaigns reaching higher excess over the target. Figure 2 displays a set of quantile values for those outcomes by country (see also Table A2 in Appendix A). In the light of these results, there are notable between-country differences in the distribution of outcome variables measuring the success of crowdfunding campaigns: the overfunding level and the number of investors. Furthermore, it can be observed that the disparities between countries become more outstanding as the crowdfunding success increases. These features suggest the need for analysing the whole distribution of the outcome variables, and specially their highest levels.

Table 1. Variables and descriptive statistics.

	All				UK		Spain		Variable Description
Success outcomes	Mean	SD	Min.	Max.	Mean	SD	Mean	SD	
Overfunding level	1.45	0.45	1.01	4.33	1.47	0.45	1.29	0.39	Total funding amount raised at the end of campaign divided by the target capital
# Investors	324.95	262.76	3	1581	361.37	263.33	89.12	54.56	Number of investors
Explanatory variables									
Equity offered	12.07	6.97	0	45.18	11.95	6.77	12.80	8.19	Percentage of equity offered
Voting rights	0.04	0.196	0	1	0.03	0.17	0.10	0.30	Dummy = 1 if only shares with voting rights are issued; 0 otherwise
Social capital	2.89	1.14	0	4	3	1.18	2.22	0.42	Number of founders' social networks
Control variables									
Founders' education	0.17	0.37	0	1	0.16	0.32	0.50	0.50	Dummy = 1 if any of the entrepreneurs has postgraduate academic training; 0 otherwise
Team size	2.50	1.28	1	6	2.38	1.21	3.27	1.48	Number of founders supporting the project
Industry 1	0.07	0.25	0	1	0.06	0.24	0.10	0.30	Dummy = 1 if industry is art, design; 0 otherwise
Industry 2	0.003	0.058	0	1	0.003	0.06	–	–	Dummy = 1 if industry is ethics, environmental; 0 otherwise
Industry 3	0.06	0.24	0	1	0.06	0.23	0.10	0.30	Dummy = 1 if industry is leisure, sports; 0 otherwise
Industry 4	0.16	0.37	0	1	0.15	0.36	0.17	0.38	Dummy = 1 if industry is food; 0 otherwise
Industry 5	0.17	0.37	0	1	0.12	0.32	0.50	0.51	Dummy = 1 if industry is technology, R&D; 0 otherwise
Industry 6	0.18	0.39	0	1	0.21	0.41	0.02	0.16	Dummy = 1 if industry is manufacture; 0 otherwise
Industry 7	0.23	0.42	0	1	0.26	0.44	0.02	0.16	Dummy = 1 if industry is software development; 0 otherwise
Industry 8	0.13	0.33	0	1	0.14	0.35	0.07	0.27	Dummy = 1 if industry is retail; 0 otherwise
Tax incentives	0.79	0.40	0	1	0.83	0.37	0.55	0.50	Dummy = 1 if investment offers tax incentives; 0 otherwise
Age of the company					1279.08	1088.08	–	–	Company's age as the difference between incorporation date and campaign ending date
# rounds					0.09	0.37	–	–	Number of founders' previous rounds

As previously mentioned, one main goal of this research is to assess the effects of some key project characteristics over the distribution of overfunding success, paying special attention to those projects with prominent excess of funds. For this purpose, we propose the use of QR models introduced by Koenker [41]. Generally speaking, the QR methodology allows users to assess how any percentile (or quantile) of the conditional distribution of the dependent variable is affected by changes in the explanatory variables. By examining several points of the conditional distribution of dependent variable, one can examine how the entire distribution, rather than only the mean, changes with the values of the covariates, and even, evaluate for which percentiles such effects are more remarkable. Namely, we expect that certain percentiles (the highest ones) will be more affected by campaign characteristics than are other percentiles. As additional advantages of QR, we highlight that (i) it is

robust against outliers and (ii) it is not conditioned by the fulfilment of a set of requirements as the classical linear regression (OLS) is (i.e., residuals being normally distributed with uniform variance or multicollinearity issues). In this regard, given the positive skewness of the overfunding level and # investors, neither of them are normally distributed (p-value < 0.001) so that OLS cannot be applied. (Notice that the dependent variable not only may be continuous, but also binary or categorical (see Machado and Silva [42], Aristodemou et al. [43] for more details about quantile regression in these settings).)

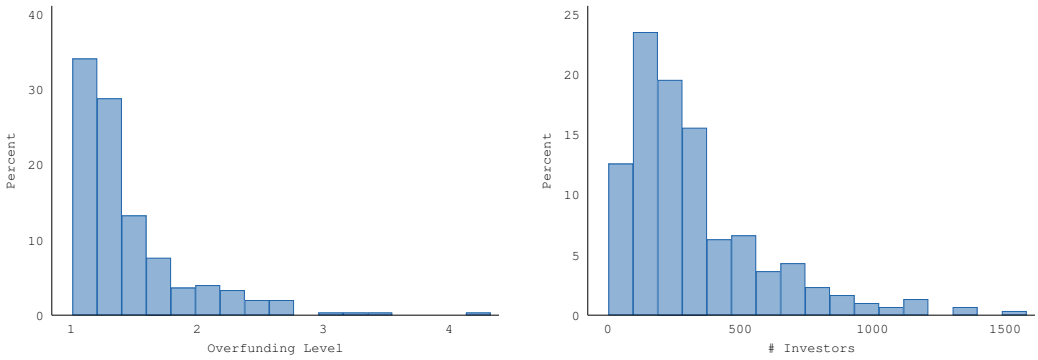

Figure 1. Distribution of the overfunding level (**left side**) and # investors (**right side**).

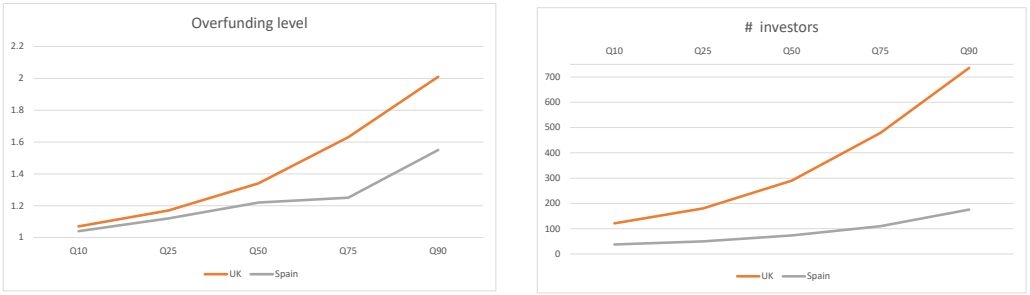

Figure 2. Quantile values for the overfunding level (**left side**) and # investors (**right side**) by country.

Then, QR provides a richer analysis of the drivers for overfunding success because it explores the impacts on the entire distribution of outcomes, not merely on conditional mean, and it allows to compare how some percentiles of outcome (the level of overfunding or # investors) may be more highly affected by certain offering characteristics than other percentiles, specially the highest ones. However, for the sake of comparability, OLS is conducted. In the crowdfunding literature, the QR technique is applied by Ryu et al. [44] in reward-based crowdfunding and Vulkan et al. [9] in equity crowdfunding projects.

To test the hypotheses described in the previous section, we analyse whether the campaign characteristics enhance or inhibit overfunding success under a ceteris paribus assumption. In our particular case, three campaign variables (*Equity*, *Voting rights* and *Social capital*) and a set of control variables (related to fundraiser characteristics and industry) are considered as explanatory variables, as well as the country website. The specification of the model can be expressed by

$$\begin{aligned} Q_{Y/X}(q/X) &= \beta_{0q} + \beta_{1q}[Equity]_i + \beta_{2q}[Voting\,rights]_i + \beta_{3q}[Social\,capital]_i + \beta_{4q}[Country]_i \\ &+ \beta_{5q}[Founders'characteristics]_i + \beta_{6q}[Industry]_{6i}, \end{aligned}$$

where Y denotes the outcome variable (the level of overfunding or # investors); X denotes the set of explanatory variables: *Equity*, *Voting rights*, *Social capital*, *Country*, *Founders' characteristics* and *Industry*, respectively; $Q_{Y/X}(q/X)$ denotes the conditional qth quantile of outcome Y given X; and β_{iq},

$i = 1, \ldots, 6$ stands for the coefficient of the QR, and measures how the specified quantile changes with a one-unit change in the corresponding explanatory variable.

We also collected information about the campaign target. However, we does not include this variable into the econometric specification because of endogeneity bias evidenced by prior research (Vismara [11], Cumming et al. [38]). In particular, Cumming et al. [38] find that the "all-or-nothing" model (vs. "keep-it-all") forces the fundraiser to bear greater risk and encourages funders to pledge more capital enabling fundraisers to set larger targets. Instead, we consider the *Team Size* variable as a proxy for the size of the project.

In order to assess the impact of campaign characteristics on the distribution of overfunding success, we estimate quantile regressions at five different quantiles: 10th, 25th, 50th or median, 75th and 90th (see Table A2 in Appendix A). More specifically, we perform the command *qreg2* in STATA which reports standard errors and t-statistics that are asymptotically valid under heteroskedasticity and misspecification (Machado and Silva [45]).

3.2. Results

3.2.1. Determinants of Overfunding Success: Overall Analysis

Tables 2 and 3 present estimations of OLS and QR models for the determinants of overfunding level and of the number of investors, respectively, in the whole sample. In both tables, OLS and QR estimations are displayed when control variables are included (right side) or not (left side). In order to assess what happens in the extreme values of the data set, QR models using five quantiles were considered. For each qth QR, the estimated coefficient of a particular explanatory variable $\hat{\beta}_{iq}$ is interpreted as the impact of a one-unit change in this variable on the qth quantile value of the overfunding level (or number of investors), controlling for the rest of regressors.

As expected, QR estimation shows that the distribution of overfunding success depends crucially on the campaign characteristics. We find heterogeneous patterns for the key explanatory variables along the distributions of overfunding. Overall, the greatest and most significant effects of the three campaign variables (*Equity*, *Voting rights* and *Social capital*) are located at the highest quantiles 75th and 90th (the two last columns in Tables 2 and 3); that is, those offerings with overfunding level (number of investors) higher than 1.55 and 2.01 (406 and 700), respectively. In addition, there are significant differences across countries at nearly all quantiles of the overfunding distributions.

The sign and intensity of the effects of *Equity* on the overfunding level (see Table 2) depend on the specific quantile. We obtain a monotonically decreasing pattern along the distribution. The effects start out being positive and significant for the lowest quantile, 10th, and become more negative and significant at the top end of the distribution, 75th and 90th quantiles. Notice that these results are robust to the inclusion of the control variables. For instance, the Q90 model in Table 2 shows that, if equity increases one unit, the overfunding level of the 90% of offerings will decrease 0.0245 points (controlling for the rest of variables). The negative and significant impact of equity on the number of investors is observed only when the control variables are considered and at the 90th quantile, although with a similar pattern along the distribution (see Table 3). Both findings support the Hypothesis 1 Therefore, our empirical evidence suggest that the positive signalling role of low equity offerings is stronger for the most successfully overfunded projects.

The influence of *Voting rights* on the overfunding level (Table 2) and the number of investors (Table 3) is negative and significant for the 75th and 90th quantiles. In both cases, the effects remain after considering the control variables. These findings seem to indicate that the issuance of only shares with voting rights reduce significantly the overfunding level and the attraction of investors, particularly for the most successfully overfunded projects. Specifically, when voting rights are offered, the maximum overfunding level achieved for the 90% of projects decreases by 0.470 points (see Q90 model in Table 2), and the number of investors is reduced by 250 (Q90 model in Table 3). Thus, estimations confirm Hypothesis 2. Our results are consistent with the idea that issuing shares with voting rights, which

will predominantly be purchased by crowd investors, may send negative signals to other types of investors (professional, experienced and angels) and, thereby, may shrink the overfunding success.

Social capital affects the overfunding level in a different manner as compared to the number of investors. We find that the number of founders' social networks increases significantly the overfunding level only at the 90th quantile, and when controlling for additional variables (see last column in Table 2). Nevertheless, *Social capital* exerts a significantly attracting effect on the number of investors for all quantiles but the highest one. The Q75 model in Table 3 indicates that, for the 25% of those projects with a number of investors higher than 406 (the 75th quantile value), each additional social network increases support in 45 additional investors. These results provide support for the Hypothesis 3 in the sense that a greater presence of founders in the social networks facilitates to reach higher success in overfunding, being such a positive impact more salient on the number of investors.

To test the website effects, we analysis the *Country* variable. In line with Hypothesis 4, estimations show how the projects launched on the UK website achieve greater overfunding success compared to the projects launched on the Spanish website. In particular, we find significant differences in the overfunding level for the three middle points of the distribution (see Q25, Q50 and Q75 models with control variables in Table 2). Regarding the number of investors (Table 3), differences between countries are significant along the entire distribution. This result implies that the British projects attract a higher number of investors compared to the Spanish projects, regardless of the quantile value. Notice that such a result holds even after controlling for *Team size* (as proxy for the company size).

Regarding the control variables, estimations show that *Founders' education* and *Team size* influence overfunding success but with opposite signs. Having entrepreneurs with high education level (postgraduate) significantly reduces the overfunding level in 0.195 points at the 90th quantile, and the number of investors at the 75th and 90th quantiles in 93.48 and 148.8, respectively. However, we find significantly positive effects of *Team size* on the number of investors at all points of the distribution but the extreme value 90th. Taking the team size as a proxy for company size, this result seems to indicate that larger projects will attract more investors along (nearly) the entire distribution.

Last, there exist significant effects related to industry factor. We find that the most successful campaigns correspond to Industry 3 (Leisure/Sport), Industry 4 (Food) and Industry 5 (Technology) at some specific quantile values of the distributions of overfunding level and number of investors. (Estimations show less attractiveness of environmental projects for the overfunding level and for the number of investors (see the negative and significant coefficient of Industry 2 in the quantile 90th in Table 2 and its significant coefficients at the quantiles 75th and 90th in Table 3, respectively). However, these results need to be taken carefully since the small number of this kind of projects in our sample.)

Table 2. Determinants of the overfunding level for all campaigns. Results from OLS and QR models.

Variables	**(1) OLS**	**(2) Q10**	**(3) Q25**	**(4) Q50**	**(5) Q75**	**(6) Q90**	**(7) OLS**	**(8) Q10**	**(9) Q25**	**(10) Q50**	**(11) Q75**	**(12) Q90**
Equity	−0.0142 *** (3.39×10^{-3})	3.84×10^{-3} ** (1.51×10^{-3})	0 (2.45×10^{-3})	-5.53×10^{-3} * (3.23×10^{-3})	-9.38×10^{-3} * (4.84×10^{-3})	−0.0226 *** (5.84×10^{-3})	−0.0139 *** (3.42×10^{-3})	3.72×10^{-3} ** (1.66×10^{-3})	5.89×10^{-4} (2.18×10^{-3})	-3.94×10^{-3} (2.95×10^{-3})	−0.0143 *** (5.07×10^{-3})	−0.0245 *** (4.87×10^{-3})
Voting rights	−0.211 *** (0.0598)	−0.00662 (0.0654)	−0.0400 (0.0672)	−0.116 (0.0848)	−0.191 ** (0.0843)	−0.641 *** (0.150)	−0.219 *** (0.0710)	−0.0136 (0.110)	−0.0677 (0.0692)	−0.0142 (0.0841)	−0.234 ** (0.0938)	−0.470 *** (0.119)
Social capital	0.0265 (0.0181)	-2.98×10^{-4} (0.0140)	−0.0100 (0.0148)	5.99×10^{-3} (0.0161)	0.0554 (0.0373)	0.0786 (0.0485)	0.0365 * (0.0194)	0.0121 (0.0228)	−0.0128 (0.0146)	0.0102 (0.0193)	0.0311 (0.0307)	0.0638 ** (0.0270)
Country	0.124 * (0.0669)	0.0219 (0.0317)	0.0600 (0.0397)	0.133 *** (0.0415)	0.241 *** (0.0810)	0.109 (0.248)	0.192 ** (0.0834)	0.0333 (0.0415)	0.0963 ** (0.0433)	0.220 *** (0.0660)	0.268 ** (0.114)	0.0967 (0.246)
Founders' education							−0.0492 (0.0769)	0.0390 (0.0373)	0.0135 (0.0389)	−0.0416 (0.0670)	−0.0101 (0.0974)	−0.195 ** (0.0833)
Team size							0.0392 * (0.0233)	0.0139 (0.0139)	0.00269 (0.0134)	0.0139 (0.0169)	0.0225 (0.0416)	0.0430 (0.0502)
Industry 1							0.109 (0.123)	0.00372 (0.0671)	−0.0170 (0.0880)	0.0991 (0.102)	0.0994 (0.124)	0.189 (0.253)
Industry 2							−0.0851 (0.0675)	0.118 (0.211)	0.0193 (0.166)	−0.0755 (0.145)	−0.190 (0.127)	−0.530 *** (0.159)
Industry 3							0.180 * (0.103)	0.0590 (0.0687)	−0.0392 (0.0705)	0.202 * (0.117)	0.418 ** (0.163)	0.362 * (0.192)
Industry 4							0.167 * (0.0926)	0.0127 (0.0586)	0.0396 (0.0656)	0.160 (0.0973)	0.346 ** (0.154)	0.244 (0.163)
Industry 5							0.222 * (0.117)	0.0800 (0.0538)	0.0846 (0.0641)	0.199 ** (0.0775)	0.229 (0.145)	0.386 (0.249)
Industry 6							0.119 (0.0837)	0.0654 (0.0567)	0.0597 (0.0644)	0.0994 (0.0653)	0.213 * (0.125)	0.136 (0.182)
Industry 7							0.0864 (0.0893)	0.0349 (0.0526)	−0.0154 (0.0581)	0.0244 (0.0637)	0.0462 (0.115)	0.0815 (0.172)
Constant	1.442 *** (0.0990)	1.002 *** (0.0580)	1.140 *** (0.0601)	1.273 *** (0.0661)	1.367 *** (0.153)	2.027 *** (0.340)	1.138 *** (0.117)	0.885 *** (0.108)	1.076 *** (0.0819)	1.042 *** (0.108)	1.225 *** (0.167)	1.791 *** (0.305)
Observations	299	299	299	299	299	299	297	297	297	297	297	297
R^2	0.079	0.032	0.008	0.068	0.065	0.072	0.107	0.001	0.016	0.065	0.078	0.092
Objective F.		0.0411	0.0908	0.142	0.144	0.0939		0.0402	0.0887	0.140	0.138	0.0897
MSS *p*-value		4.12×10^{-4}	0.0161	3.78×10^{-6}	7.45×10^{-4}	9.59×10^{-4}		0.0225	0.272	5.78×10^{-4}	0.0107	5.33×10^{-3}

Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 3. Determinants of the number of investors for all campaigns. Results from OLS and QR models.

Variables	**(1) OLS**	**(2) Q10**	**(3) Q25**	**(4) Q50**	**(5) Q75**	**(6) Q90**	**(7) OLS**	**(8) Q10**	**(9) Q25**	**(10) Q50**	**(11) Q75**	**(12) Q90**
Equity	−5.560 **	1.032	0.450	−1.260	−5.326	−4.681	−5.561 ***	1.268	−1.041	−0.787	−3.363	−7.296 *
	(2.228)	(1.143)	(0.957)	(1.444)	(3.538)	(3.123)	(2.121)	(0.999)	(1.472)	(1.436)	(2.496)	(3.712)
Voting rights	−120.4 ***	−0.151	−13.60	−51.13	−118.6 ***	−177.9 ***	−131.8 ***	−16.46	11.36	−45.36	−185.0 ***	−250.9 **
	(33.84)	(29.83)	(29.53)	(36.50)	(41.88)	(48.78)	(37.94)	(45.03)	(32.29)	(36.47)	(45.98)	(101.8)
Social capital	24.32 *	19.34 ***	24.59 ***	31.47 **	32.80 *	33.81	35.81 ***	19.76 ***	24.71 ***	42.01 ***	45.63 ***	39.11
	(12.61)	(5.826)	(7.697)	(12.59)	(19.09)	(27.66)	(12.16)	(6.727)	(7.974)	(10.46)	(16.25)	(35.94)
Country	240.3 ***	76.43 ***	119.5 ***	174.1 ***	290.5 ***	423.4 ***	275.7 ***	94.59 ***	123.5 ***	183.3 ***	265.2 ***	320.6 ***
	(21.21)	(13.13)	(15.71)	(21.54)	(34.82)	(59.71)	(42.37)	(18.38)	(25.75)	(28.52)	(44.17)	(81.38)
Founders' education							−44.75	−23.87	−19.87	−21.89	−93.48 **	−148.8 *
							(37.75)	(16.73)	(22.20)	(25.57)	(36.50)	(77.45)
Team size							46.11 ***	12.69 **	15.36 **	23.27 **	62.02 ***	38.05
							(13.49)	(5.641)	(6.788)	(11.78)	(19.69)	(24.38)
Industry 1							42.06	−10.58	−17.98	−13.16	−15.08	41.34
							(66.72)	(24.41)	(34.21)	(44.71)	(71.29)	(309.2)
Industry 2							−74.48 **	14.62	9.932	−85.59	−177.9 ***	−381.8 ***
							(30.76)	(117.6)	(91.24)	(78.56)	(62.30)	(80.00)
Industry 3							75.07	−19.02	−7.792	47.74	154.8 **	112.8
							(49.46)	(33.45)	(45.78)	(47.44)	(67.18)	(119.5)
Industry 4							80.49 *	−7.359	18.88	5.850	134.0 *	112.7
							(41.18)	(24.66)	(31.32)	(35.36)	(76.67)	(80.63)
Industry 5							111.9 **	−16.21	13.41	35.72	99.40	111.3
							(50.20)	(28.61)	(33.81)	(38.98)	(71.36)	(109.1)
Industry 6							84.28 **	−1.712	23.99	58.94	94.74	77.26
							(41.03)	(27.56)	(30.84)	(39.76)	(79.15)	(102.8)
Industry 7							39.08	−49.18 **	−21.96	−22.53	58.38	68.98
							(41.54)	(22.63)	(28.73)	(36.73)	(68.87)	(101.4)
Constant	118.2 **	−19.81	−13.33	24.03	138.9 **	236.4 **	−119.6	−41.88	−42.56	−79.41	−108.6	181.8
	(46.36)	(23.15)	(27.13)	(44.01)	(60.39)	(97.51)	(76.92)	(38.57)	(46.25)	(60.92)	(88.88)	(140.4)
Observations	299	299	299	299	299	299	297	297	297	297	297	297
R^2	0.169	0.112	0.135	0.155	0.168	0.163	0.233	0.136	0.191	0.191	0.212	0.207
Objective F.		23.53	51.07	80.44	82.31	52.10		22.39	49.07	75.95	76.43	49
MSS p-value		7.92×10^{-6}	2.69×10^{-5}	1.56×10^{-4}	3.93×10^{-5}	8.4×10^{-4}		3.53×10^{-4}	1.11×10^{-5}	1.38×10^{-4}	1.38×10^{-3}	1.22×10^{-3}

Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Therefore, the QR methodology provides an empirical basis for assessing what are the main drivers for overfunding success and in which percentiles the effects are more relevant. In our data, the QR models with the highest goodness of fit and most significant explanatory variables are placed on the top quantiles of overfunding success. From a methodological perspective, these results support the need of examining the influence of determinants according to the conditional distribution of overfunding. Neither all successful projects are affected by the same relevant factors, nor the effects of significant factors have similar magnitudes across quantiles.

3.2.2. Determinants of Overfunding Success: Two-Country Analysis

Based on differences observed across countries, we next deal with the determining factors of overfunding for each country separately. We divide the total sample according to the country website used by fundraisers to fund their project, Spain or the UK. Tables 4 and 5 present estimations for the determinants of the overfunding level and the number of investors, respectively, in the UK subsample. Likewise, Tables 6 and 7 show the results in the Spain subsample. In this case, the study of multicollinearity shows a mean VIF equal to 2.52 and 2.32 for the UK and Spain, respectively.

In the UK, the impact of the key explanatory variables are quite similar to those observed in the entire sample. That is, the effects of campaign characteristics are particularly significant in the two highest quantiles of the overfunding distribution, 75th and 90th (see Table 4). These quantile values correspond to the campaigns with overfunding level (number of investors) higher than 1.63 and 2.01 (479 and 736), respectively. When the control variables are considered, *Equity* and *Voting rights* reduce the overfunding level while *Social capital* increases it. The industries 3, 4 and 5 are also the activity sectors which raise more funds beyond the target. Regarding investor distribution (Table 5), two relevant drivers are observed as well as the expected effects of *Equity*, *Social capital* and *Team size*. For the 75th and 90th quantiles, the coefficients of *Age of the company* and # *rounds* are positive and significant. These results suggest that investors' perceived risk may be lowered when companies are more mature and founders have experience in previous crowdfunding rounds. Notice that there are two specific industries which strongly motivate funders to invest in UK projects at the 90th quantile: Industry 5 (Technology) and Industry 7 (Software).

On the contrary, in Spain, estimations shown in Tables 6 and 7 indicate that few explanatory factors influence significantly on overfunding success. (Because of the small size of the subsample, we estimate bootstrapped quantile regressions with 500 repetitions to obtain an estimation of the variance–covariance matrix of the estimators via bootstrapping.) We only find two main drivers at the 90th quantile of overfunding distribution: (i) the issuance of shares with *Voting rights*, as its negative and significant coefficient indicates, and (ii) the industry factor. In particular, the projects developed in Industry 1 (Art/Design), Industry 5 (Technology) and Industry 6 (Manufacture) reach significantly higher overfunding levels, shown by their positive coefficients.

Last, it should be highlighted the relevance of the technological sector in overfunding we have found in both countries. Descriptive data shown in Table 1 of Section 3 displayed a wide dispersion in projects across industries in the UK (4–8 industries sum 230 projects, 87.78%), while in Spain half of the projects belong to industry 5 (20 campaigns, 50%). In particular, the technology-related sector (industries 5 and 7 in our sample) accounts for 37.78% in the UK and 52.5% in Spain. The importance of technological sector in crowdfunding has been assessed by previous research (Cordova et al. [15]).

Therefore, we replicate the models presented in previous Tables 2 and 3 only for the technological campaigns launched in the two countries. Now, the mean value of the VIF index is 1.24, so that no multicollinearity problem is observed. The results are shown in Tables A3 and A4 in Appendix A. As can be seen, we obtain similar effects for the campaign characteristics related to *Equity*, *Voting rights* and *Social capital* to explain the overfunding level and the number of investors. However, surprisingly, we do not find significant differences in the overfunding level between countries (see the insignificant coefficients of *Country* in Table A3 at all quantiles). Yet, British technological campaigns attract a higher number of investors than the Spanish ones (see Table A4).

In sum, three novel findings can be emphasised regarding crowdfunding behaviour. First, the effects of the key campaign characteristics are particularly strong in the highest levels of overfunding success. In Appendix A, Figures A1 and A2 illustrate how the coefficients of our four key variables change over quantiles, in the regressions for overfunding level and number of investors, respectively, with control variables and all campaigns included. It can be seen that the effects are nonlinear, and that their dynamics gradually evolve towards the expected effects. Vulkan et al. [9] also find nonlinear effects in equity crowdfunding using QR models. However, while these authors focus on the impact of initial herding behaviour, our study extends their results to include other relevant quality-signalling factors such as equity offered, the type of shares and the number of founders' social networks. Our findings suggest that platforms and fundraisers should pay special attention to these factors when designing crowdfunding campaigns in order to tackle information asymmetries and enhance market efficiency in a sustainable way. Sustainable finance requires an optimal allocation of funds among innovation investments with good future prospects.

Second, outstanding differences between countries are observed along the (nearly) entire distribution of overfunding success. Factors like trust in institutions, transparency or regulation, which depend crucially on governments, may lead to distinct behavioural patterns between countries (Dushnitsky et al. [46], Cicchiello et al. [47]). In other contexts, evidence for between-country variation is mixed (see, for example, Batrancea et al. [48] and Batrancea and Nichita [49] in tax compliance behaviour). Our findings support a strong relationship between equity crowdfunding behaviour and country.

Third, the technological projects are those which overcome more successfully the country-related barriers to funding. This finding is consistent with the determining role of crowdfunding in promoting technological progress and innovation, specific goals of sustainable development. According to Brundtland et al. [50], technology reorientation and risk management is among the key elements of sustainable development. However, when explaining success in crowdfunding (reward and equity), Motylska-Kuzma [51] finds that the sustainable orientation of the campaign itself is not so important to persuade investors and attract funding. Based on this result, our research highlights the relevance of the technology sector, as well as the key campaign-specific features studied, for sustainability issues.

Table 4. Determinants of the overfunding level for the UK campaigns. Results from OLS and QR models.

Variables	(1) OLS	(2) Q10	(3) Q25	(4) Q50	(5) Q75	(6) Q90	(7) OLS	(8) Q10	(9) Q25	(10) Q50	(11) Q75	(12) Q90
Equity	−0.0153 ***	0.00135	−0.00128	−0.00733 *	−0.0145 **	−0.0272 ***	−0.0143 ***	0.00414	0.000271	−0.00356	−0.0133 ***	−0.0241 ***
	(0.00387)	(0.00194)	(0.00258)	(0.00396)	(0.00610)	(0.00465)	(0.00394)	(0.00258)	(0.00274)	(0.00349)	(0.00510)	(0.00426)
Voting rights	−0.212 ***	−0.00881	−0.0450	−0.107	−0.241 **	−0.457 ***	−0.203 **	−0.0300	−0.0771	−0.116	−0.148	−0.435 ***
	(0.0730)	(0.0998)	(0.0910)	(0.117)	(0.120)	(0.0709)	(0.0959)	(0.186)	(0.0896)	(0.110)	(0.157)	(0.0800)
Social capital	0.0305 *	0.00638	−0.00547	0.00981	0.0449	0.0817 **	0.0362 *	0.0159	−0.00353	0.00309	0.0568 **	0.0575 **
	(0.0185)	(0.0146)	(0.0162)	(0.0184)	(0.0354)	(0.0406)	(0.0204)	(0.0203)	(0.0157)	(0.0195)	(0.0281)	(0.0260)
Tax incentives							−0.0719	0.0499	−0.0449	0.0121	−0.237	−0.260 *
							(0.0842)	(0.0638)	(0.0697)	(0.0708)	(0.304)	(0.145)
Founders' education							−0.0223	−0.0462	0.0108	−0.0638	−0.00128	−0.0661
							(0.102)	(0.0663)	(0.0483)	(0.0837)	(0.189)	(0.134)
Team size							0.0267	0.0166	0.00806	0.00947	0.0279	0.00615
							(0.0244)	(0.0169)	(0.0158)	(0.0203)	(0.0378)	(0.0402)
Age-of-company							3.20×10^{-5}	1.64×10^{-5}	-5.32×10^{-6}	2.09×10^{-5}	4.86×10^{-5}	2.59×10^{-5}
							(2.45×10^{-5})	(2.28×10^{-5})	(3.07×10^{-5})	(2.49×10^{-5})	(3.50×10^{-5})	(5.98×10^{-5})
# rounds							−0.0340	−0.00235	−0.00265	0.0867	0.0262	0.0859
							(0.0912)	(0.0609)	(0.0535)	(0.166)	(0.134)	(0.167)
Industry 1							0.0620	−0.0506	−0.0347	0.0333	0.139	0.0425
							(0.114)	(0.0807)	(0.110)	(0.122)	(0.172)	(0.197)
Industry 2							−0.0695	0.0250	0.0156	−0.0914	−0.159	−0.441 ***
							(0.0702)	(0.247)	(0.183)	(0.159)	(0.124)	(0.128)
Industry 3							0.197	−0.0172	−0.0403	0.217	0.456 ***	0.354 *
							(0.127)	(0.0880)	(0.0979)	(0.171)	(0.165)	(0.195)
Industry 4							0.192 *	−0.0338	0.0309	0.167	0.398 ***	0.281 *
							(0.105)	(0.0730)	(0.0838)	(0.145)	(0.129)	(0.163)
Industry 5							0.253	−0.0124	0.0643	0.132	0.278	0.528 **
							(0.164)	(0.0814)	(0.0906)	(0.0966)	(0.184)	(0.235)
Industry 6							0.125	−0.0273	0.0488	0.0878	0.178	0.0962
							(0.0911)	(0.0554)	(0.0645)	(0.0723)	(0.113)	(0.201)
Industry 7							0.0859	−0.0411	−0.0255	−0.00125	0.119	−0.0520
							(0.0940)	(0.0574)	(0.0619)	(0.0701)	(0.0980)	(0.197)
Constant	1.568 ***	1.047 ***	1.210 ***	1.415 ***	1.708 ***	2.176 ***	1.370 ***	0.910 ***	1.197 ***	1.256 ***	1.517 ***	2.102 ***
	(0.0811)	(0.0586)	(0.0706)	(0.0777)	(0.171)	(0.119)	(0.145)	(0.126)	(0.129)	(0.127)	(0.354)	(0.286)
Observations	259	259	259	259	259	259	246	246	246	246	246	246
R^2	0.069	0.008	0.026	0.069	0.068	0.068	0.101	0.001	0.016	0.044	0.075	0.082
Objective F.		0.0434	0.0957	0.148	0.147	0.0930		0.0408	0.0907	0.138	0.130	0.0834
MSS *p*-value		0.0333	0.0131	3.49×10^{-7}	1.58×10^{-5}	5.11×10^{-4}		0.117	0.0813	0.0117	0.00185	0.0165

Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 5. Determinants of the number of investors for the UK campaigns. Results from OLS and QR models.

Variables	**(1) OLS**	**(2) Q10**	**(3) Q25**	**(4) Q50**	**(5) Q75**	**(6) Q90**	**(7) OLS**	**(8) Q10**	**(9) Q25**	**(10) Q50**	**(11) Q75**	**(12) Q90**
Equity	−6.779 **	0.739	−1.055	−1.948	−9.388 ***	−11.94	−5.682 **	0.267	−1.325	−4.373 *	−5.500 *	−3.970
	(2.702)	(1.525)	(1.479)	(1.846)	(3.227)	(20.70)	(2.453)	(1.603)	(1.951)	(2.546)	(3.059)	(3.873)
Voting rights	−163.9 ***	−31.28	11.30	−75.36	−273.8 ***	−318.5 ***	−124.0 **	−31.43	22.60	−93.11	−49.20	−67.80
	(44.54)	(74.00)	(61.60)	(70.27)	(85.42)	(104.5)	(59.32)	(144.0)	(53.10)	(75.83)	(100.4)	(96.51)
Social capital	22.68 *	19.41 ***	29.83 ***	27.28 *	16.42	25.05	37.10 ***	22.47 **	31.88 ***	30.05 **	31.94 **	39.99 *
	(13.14)	(6.928)	(9.000)	(15.54)	(25.11)	(31.63)	(12.92)	(10.78)	(10.74)	(12.62)	(15.55)	(21.10)
Tax incentives							23.41	11.04	24.88	10.71	33.02	−3.779
							(45.50)	(26.31)	(30.94)	(47.66)	(87.36)	(101.3)
Founders' education							−88.00 **	−2.879	−58.78	−9.941	−71.62	−158.5 *
							(41.76)	(33.89)	(40.69)	(41.45)	(46.72)	(90.28)
Team size							45.51 ***	13.07	22.24 *	43.89 **	62.13 ***	71.55 ***
							(14.92)	(9.225)	(11.80)	(19.88)	(23.09)	(19.71)
Age-of-company							0.0560 ***	−0.00189	0.00717	0.0435	0.0934 ***	0.116 ***
							(0.0204)	(0.0125)	(0.0217)	(0.0380)	(0.0247)	(0.0213)
# rounds							55.54	9.963	−16.63	152.4	250.9 ***	173.8 **
							(93.54)	(37.90)	(36.59)	(133.8)	(56.67)	(78.75)
Industry 1							110.5	−62.23	−16.11	5.151	7.319	476.8 *
							(83.31)	(56.12)	(59.50)	(72.69)	(62.01)	(274.4)
Industry 2							−58.31	13.97	−13.26	−67.63	−179.2 ***	−240.2 ***
							(36.11)	(138.2)	(115.5)	(91.84)	(67.19)	(62.69)
Industry 3							90.29	−21.37	−9.034	−2.180	162.3	241.4 **
							(58.17)	(46.74)	(56.82)	(65.32)	(113.7)	(107.0)
Industry 4							102.3 **	−14.73	11.56	15.99	22.71	171.2
							(46.75)	(40.31)	(37.78)	(43.18)	(49.14)	(112.4)
Industry 5							115.3 *	−43.81	2.584	21.92	149.3 *	416.7 **
							(59.44)	(60.26)	(53.99)	(55.71)	(79.01)	(168.8)
Industry 6							106.1 **	−13.38	1.287	60.56	46.67	163.1 *
							(40.98)	(34.05)	(38.19)	(46.57)	(63.42)	(83.65)
Industry 7							98.96 **	−55.86	−40.88	−2.490	48.25	361.9 ***
							(44.33)	(35.74)	(38.26)	(46.54)	(68.56)	(83.99)
Constant	379.4 ***	59.28 *	110.3 ***	222.4 ***	545.7 ***	758.5 ***	28.98	55.33	38.19	70.05	60.77	51.05
	(62.94)	(31.54)	(37.44)	(68.51)	(96.95)	(206.8)	(80.14)	(62.32)	(66.79)	(84.09)	(118.5)	(155.1)
Observations	259	259	259	259	259	259	246	246	246	246	246	246
R^2	0.058	0.015	0.028	0.044	0.056	0.057	0.208	0.034	0.090	0.169	0.154	0.143
Objective F.		26.22	56.73	89.42	90.50	57.10		23.67	52.01	77.74	71.90	43.88
MSS p-value		0.168	0.582	0.255	6.55×10^{-5}	0.00740		0.905	0.0439	1.06×10^{-10}	1.64×10^{-5}	3.42×10^{-5}

Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 6. Determinants of the overfunding level for Spain campaigns. Results from OLS and QR (bootstrap errors) models.

Variables	(1) OLS	(2) Q10	(3) Q25	(4) Q50	(5) Q75	(6) Q90	(7) OLS	(8) Q10	(9) Q25	(10) Q50	(11) Q75	(12) Q90
Equity	−0.0103	0.00652 *	0.00414	0	−0.00240	−0.0299	−0.00331	0.00652	0.00592	−0.00282	−0	−0.0242
	(0.00658)	(0.00332)	(0.00360)	(0.00328)	(0.00914)	(0.0193)	(0.00818)	(0.00714)	(0.00731)	(0.00990)	(0.0170)	(0.0234)
Voting rights	−0.181 *	0.0451	0.0258	−0.0300	−0.0749	−0.458	−0.355 *	−0.0440	−0.0322	−0.124	−0.290	−0.882 *
	(0.0960)	(0.0497)	(0.0506)	(0.0579)	(0.156)	(0.348)	(0.185)	(0.134)	(0.159)	(0.232)	(0.391)	(0.494)
Social capital	−0.199 *	0.01000	−0.0566	−0.130 **	−0.0893	−0.799 *	−0.177	0.0235	0.0125	−0.147	−2.98e-08	0.0221
	(0.105)	(0.0362)	(0.0455)	(0.0637)	(0.190)	(0.417)	(0.172)	(0.205)	(0.147)	(0.224)	(0.274)	(0.381)
Tax incentives							−0.0984	−0.0263	−0.0170	0.0354	−0.0400	−0.0998
							(0.167)	(0.0944)	(0.124)	(0.170)	(0.319)	(0.461)
Founders' education							0.0238	0.0754	0.0832	−0.102	0.200	0.463
							(0.166)	(0.0794)	(0.0944)	(0.160)	(0.299)	(0.445)
Team size							0.0657	−0.00262	−0.00560	0.0116	0.0200	−0.0425
							(0.0664)	(0.0287)	(0.0338)	(0.0632)	(0.115)	(0.144)
Industry 1							0.530	0.00743	0.107	−0.00215	0.290	2.398 **
							(0.433)	(0.432)	(0.442)	(0.737)	(0.914)	(1.085)
Industry 2							-	-	-	-	-	–
Industry 3							0.148	0.0576	0.0564	−0.0557	0.260	1.406
							(0.292)	(0.261)	(0.246)	(0.369)	(0.545)	(0.836)
Industry 4							0.0970	0.00916	0.103	−0.157	0.130	0.635
							(0.279)	(0.236)	(0.230)	(0.341)	(0.479)	(0.711)
Industry 5							0.260	0.151	0.157	0.0377	0.270	1.242 **
							(0.260)	(0.230)	(0.221)	(0.291)	(0.424)	(0.599)
Industry 6							0.476	0.276	0.269	0.0830	0.460	1.490 *
							(0.354)	(0.305)	(0.320)	(0.457)	(0.611)	(0.787)
Industry 7							0.0466	0.219	0.215	0.0671	−0.0200	0.109
							(0.190)	(0.191)	(0.162)	(0.233)	(0.291)	(0.399)
Constant	1.890 ***	0.945 ***	1.182 ***	1.510 ***	1.526 **	4.154 ***	1.369 **	0.853	0.885 *	1.572 **	1.010	0.999
	(0.362)	(0.125)	(0.145)	(0.146)	(0.628)	(1.427)	(0.564)	(0.626)	(0.506)	(0.756)	(0.927)	(1.356)
Observations	40	40	40	40	40	40	40	40	40	40	40	40
R^2	0.089						0.282					
Pseudo R2		0.0706	0.0690	0.0508	0.0288	0.195		0.242	0.177	0.0974	0.119	0.470

Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 7. Determinants of the number of investors for Spain campaigns. Results from OLS and QR (bootstrap errors) models.

Variables	(1) OLS	(2) Q10	(3) Q25	(4) Q50	(5) Q75	(6) Q90	(7) OLS	(8) Q10	(9) Q25	(10) Q50	(11) Q75	(12) Q90
Equity	−0.113	1.032	1.768	0.750	−0.278	−1.329	−0.520	−0.176	0.747	−0.463	0.202	−2.506
	(0.871)	(0.860)	(1.117)	(1.600)	(1.902)	(2.603)	(1.163)	(2.032)	(2.030)	(2.357)	(2.939)	(2.555)
Voting rights	−19.49	−0.151	9.970	−19.96	−27.51	−96.98 **	−20.37	−15.90	−26.99	6.796	−0.259	−40.06
	(20.14)	(22.70)	(25.93)	(33.87)	(38.31)	(45.04)	(30.04)	(43.27)	(46.67)	(49.13)	(52.29)	(56.46)
Social capital	10.98	18.54	10.21	−12.22	41.51	49.17	21.14	3.468	1.510	10.58	−13.63	73.45
	(23.88)	(12.80)	(20.82)	(34.54)	(54.64)	(54.13)	(25.13)	(29.72)	(32.42)	(37.64)	(51.22)	(60.93)
Tax incentives							−11.45	9.861	1.454	4.708	−64.84	−17.63
							(22.23)	(27.53)	(26.75)	(34.76)	(42.52)	(45.58)
Founders' education							2.702	−23.11	−16.52	2.472	17.71	−16.87
							(23.77)	(24.34)	(26.35)	(32.50)	(42.28)	(43.80)
Team size							−3.025	6.014	6.229	−1.352	−18.25	−17.97
							(6.649)	(9.754)	(8.632)	(11.38)	(15.20)	(16.56)
Industry 1							−9.763	−8.072	7.737	15.11	−17.87	32.73
							(43.16)	(55.90)	(59.03)	(65.74)	(76.74)	(87.62)
Industry 2							-	-	-	-	-	-
Industry 3							52.19	−39.07	37.53	71.32	−0.124	179.1
							(81.17)	(90.30)	(102.0)	(111.1)	(114.0)	(114.9)
Industry 4							41.57	16.55	23.11	59.04	65.89	67.30
							(50.39)	(63.42)	(65.48)	(71.63)	(88.80)	(96.86)
Industry 5							28.51	−9.818	4.454	33.59	19.92	102.7
							(43.57)	(53.73)	(59.80)	(65.73)	(69.63)	(76.15)
Industry 6							8.886	25.58	39.70	14.97	−106.9	2.476
							(60.25)	(74.89)	(81.65)	(88.42)	(99.23)	(110.5)
Industry 7							−42.50	−3.017	−2.637	−10.44	−134.8 **	−43.01
							(37.47)	(46.55)	(54.68)	(56.71)	(59.66)	(62.17)
Constant	68.09	−18.21	2.288	91.67	29.11	93.18	40.71	31.88	19.12	24.41	226.1	20.50
	(56.86)	(43.50)	(55.37)	(76.56)	(126.0)	(130.7)	(83.83)	(102.5)	(115.1)	(130.3)	(167.5)	(195.8)
Observations	40	40	40	40	40	40	40	40	40	40	40	40
R^2	0.019						0.150					
Pseudo R2		0.0947	0.0318	0.00775	0.0468	0.131		0.297	0.143	0.156	0.224	0.457

Robust standard errors in parentheses. ** $p < 0.05$.

4. Conclusions

This research has provided new insights into the literature of overfunding in equity crowdfunding. Our empirical findings have shown the relevance of campaign features like equity, voting rights and social capital to explain overfunding success. Applying a QR methodology, the strongest and most significant effects are found at the highest quantiles of the overfunding distributions, which indicates the adequacy of studying separately the most successful projects. This paper embraces previous assertions on the positive signalling roles of low equity and low issuance of shares with voting rights, and on the positive communicating role of social capital to mitigate information asymmetries between founders and crowdfunders.

In addition, we have found marked differences in overfunding success between the UK and Spain using a unique data set with projects posted on the same platform Crowdcube but through country-differentiated websites. The results reveal that the impact of country website affects most of projects, regardless of distribution of overfunding success, which suggests the pervasive influence of country-specific factors on crowdinvestor behaviour. Further development of crowdfunding could help to reduce inequalities across countries and promote economic growth, which is aligned with sustainable development goals.

This study confirms the unequal development of crowdfunding observed within the EU (European Comission [52]). Comparing the UK to Spain, the total crowdfunding financing in Spain was 62 million in 2014 (17% corresponded to equity crowdfunding), while in the UK a total of 2337 million was raised (equity crowdfunding accounted for 5%). Regulatory frameworks may be advocated as a key element for the development of crowdfunding, particularly of equity crowdfunding. Platforms may engage in some self-regulation. For instance, the terms-of-use of the largest platforms provide some guidance on prohibited offerings and how income (for founders) or contributions (for investors) should be reported for taxation or tax relief. Our study has attempted to control for platform-specific regulatory factors.

However, many other important regulatory aspects depend largely on the national laws (Cicchiello et al. [47]). The influence of national policies on crowdfunding has been widely documented by prior research (Vismara [11], Hornuf and Schwienbacher [30], Cumming and Johan [53], Klöhn [54], Estrin et al. [55]). At the EU level, there is a lack of harmonised regulatory framework for crowdfunding (European Comission [34]). In particular, for equity crowdfunding, there is just a recent Proposal for a Regulation of the European Parliament and of the Council on European Crowdfunding Service Providers (ECSP) for Business. (COM(2018) 113 final—2018/0048 (COD).) This agreement is expected to enter into force by 2021, in line with the creation of a single market for crowdfunding. (An example of the legal differences between the UK and Spain is related to economic conditions required for crowdinvestors. In the UK, it is established that restricted investors (investors with an annual income level of at least £100,000, or net assets of at least £250,000) cannot exceed 10% of their net assets (published in 2014 by the Financial Conduct Authority, see https://eurocrowd.org/wp-content/blogs.dir/sites/85/2018/06/CF$_$FactSheet$_$UK$_$June2018.pdf). In Spain, with a more restricted legislation, a maximum of 3000 euros in the same project has been set for non-accredited investors, or 10,000 euros invested in the same platform within 12 months (Law 5/2015 of 27th April 2015, see https://eurocrowd.org/wp-content/blogs.dir/sites/85/2018/06/CF$_$FactSheet$_$Spain$_$June2018.pdf)).

Therefore, a common regulatory framework promoting transparency and investors' protection is essential for balanced and sustainable development of crowdfunding, particularly of worldwide crowdfunding platforms. Policy-makers who are in charge of developing sustainable finance regulatory measures should help investors to identify and seize opportunities of sustainable investment.

Finally, this research has several limitations which can translate into avenues for further research. First, to accurately assess overfunding behaviour, the study concentrates on key campaign features designed by founders without accounting for other important factors from an investor perspective. Further research may extend this work by considering investors' motivations to continue to fund overly successful projects, instead of allocating money to other much needed projects. Behavioural determinants pointed out by recent literature (see, for example, gender and ethnic similarity between entrepreneur and investor in Venturelli et al. [56]) may also help to explain dynamics of overfunding. It is our interest to delve into this line of research in the future. Second, our sample involves only few variables directly comparable across countries. However, crowdfunding behaviour is influenced by economic, cultural and legal factors associated with country (Dushnitsky et al. [46]). Future studies may complement our work by incorporating additional drivers for overfunding in each country. Besides, the small size of our Spanish subsample has led to estimate QR regressions via bootstrapping. Availability and quality of cross-country data should be an issue for future research.

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Appendix A

Table A1. Variance inflated factors (VIFs) and Spearman correlations.

	VIF	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Success outcomes																	
Overfunding level		1															
# Investors		0.379 *	1														
Explanatory variables																	
Equity offered	1.08	−0.178 *	−0.141 *	1													
Social capital	1.25	0.114 *	0.354 *	−0.032	1												
Voting rights	1.08	−0.108	−0.168 *	−0.073	−0.208 *	1											
Control variables																	
Founder′ education	1.19	−0.078	−0.204 *	−0.007	−0.136 *	0.044	1										
Team size	1.18	0.019	0.025	−0.027	−0.226 *	0.072	0.252 *	1									
Industry 1	1.44	−0.027	−0.069	0.059	−0.035	−0.055	−0.013	0.074	1								
Industry 2	1.03	−0.045	−0.034	0.076	−0.006	−0.011	−0.026	−0.016	−0.015	1							
Industry 3	1.55	−0.0342	−0.0705	0.1083	−0.1762 *	0.0162	−0.0073	−0.1032	−0.0702	−0.0152	1						
Industry 4	1.89	0.052	0.044	0.041	0.198 *	−0.042	0.002	−0.079	−0.116 *	−0.025	−0.1134	1					
Industry 5	2.07	0.041	−0.111	−0.131 *	−0.139 *	0.044	0.182 *	0.140 *	−0.120 *	−0.026	−0.117 *	−0.195 *	1				
Industry 6	2.03	0.065	0.142	0.047	−0.012	0.078	−0.052	−0.027	−0.128 *	−0.027	−0.124 *	−0.206 *	−0.214 *	−0.254 *	1		
Industry 7	2.15	−0.040	−0.009	−0.007	−0.015	−0.027	−0.067	−0.047	−0.143 *	0.031	−0.139 *	−0.231 *	−0.240 *	−0.254 *	1		
Industry 8		−0.075	0.032	0.078	0.128	0.029	0.041	0.041	−0.104	−0.022	−0.101	−0.168 *	−0.174 *		−0.185 *	−0.207 *	1

* $p < 0.1$.

Table A2. Quantiles of the overfunding level and the number of investors, overall and by country.

	Q10	Q25	Q50	Q75	Q90
Overall					
Overfunding level	1.06	1.15	1.3	1.55	2.01
# investors	79	141	251	406	700
The UK					
Overfunding level	1.07	1.17	1.34	1.63	2.01
# investors	121	180	290	479	736
Spain					
Overfunding level	1.04	1.12	1.22	1.25	1.55
# investors	37.5	50	73.5	110	175.5

Table A3. Determinants of the overfunding level for Technology campaigns in both countries. Results from OLS and QR models.

Variables	**(1) OLS**	**(2) Q10**	**(3) Q25**	**(4) Q50**	**(5) Q75**	**(6) Q90**	**(7) OLS**	**(8) Q10**	**(9) Q25**	**(10) Q50**	**(11) Q75**	**(12) Q90**
Equity	−0.0235 ***	−0.000588	−0.00512	−0.0150 **	−0.0223 **	−0.0367 ***	−0.0243 ***	0.00214	−0.00437	−0.0101 *	−0.0224 *	−0.0381 ***
	(0.00611)	(0.00297)	(0.00491)	(0.00617)	(0.00968)	(0.00700)	(0.00685)	(0.00305)	(0.00486)	(0.00558)	(0.0131)	(0.00839)
Voting rights	−0.333 ***	−0.0633	−0.0987	−0.234 **	−0.384 ***	−0.755 ***	−0.369 ***	−0.0448	−0.102	−0.255 **	−0.386 ***	−0.818 ***
	(0.0770)	(0.0985)	(0.0987)	(0.0941)	(0.132)	(0.0973)	(0.0925)	(0.0678)	(0.110)	(0.119)	(0.142)	(0.0991)
Social capital	0.0818 **	0.0135	0.00529	0.0351	0.0922 ***	0.233 ***	0.0915 **	0.00964	−3.03e-05	0.0330	0.0919 **	0.210 ***
	(0.0364)	(0.0293)	(0.0244)	(0.0287)	(0.0349)	(0.0521)	(0.0368)	(0.0210)	(0.0224)	(0.0280)	(0.0461)	(0.0526)
Country	0.0250	−0.0561	0.0226	0.0767	−0.00588	−0.201	0.0149	−0.0186	0.0265	0.0344	0.0767	−0.186
	(0.0888)	(0.0522)	(0.0646)	(0.0687)	(0.156)	(0.174)	(0.0992)	(0.0562)	(0.0664)	(0.0809)	(0.196)	(0.198)
Founders' education							−0.0734	0.0558	0.0256	−0.0815	0.0885	−0.00722
							(0.0970)	(0.0627)	(0.0580)	(0.0813)	(0.187)	(0.164)
Team size							0.0313	0.0116	0.00868	0.0290	−0.00115	−0.0177
							(0.0398)	(0.0176)	(0.0210)	(0.0328)	(0.0763)	(0.0642)
Constant	1.498 ***	1.097 ***	1.206 ***	1.375 ***	1.606 ***	2.133 ***	1.424 ***	1.007 ***	1.171 ***	1.278 ***	1.528 ***	2.249 ***
	(0.137)	(0.0865)	(0.105)	(0.111)	(0.227)	(0.230)	(0.209)	(0.106)	(0.128)	(0.149)	(0.333)	(0.370)
Observations	118	118	118	118	118	118	116	116	116	116	116	116
R^2	0.146	0.022	0.130	0.140	0.145	0.131	0.148	0.008	0.087	0.131	0.133	0.127
Objective F.		0.0420	0.0933	0.149	0.155	0.0987		0.0408	0.0929	0.149	0.156	0.0992
MSS *p*-value		0.163	2.13×10^{-5}	6.92×10^{-5}	0.000399	0.00684		0.172	0.00839	0.000618	0.000637	0.00345

Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A4. Determinants of the number of investors for Technology campaigns in both countries. Results from OLS and QR models.

Variables	**(1) OLS**	**(2) Q10**	**(3) Q25**	**(4) Q50**	**(5) Q75**	**(6) Q90**	**(7) OLS**	**(8) Q10**	**(9) Q25**	**(10) Q50**	**(11) Q75**	**(12) Q90**
Equity	−6.365	2.635	2.123	−2.102	−6.297	−6.296	−7.309	2.491	2.123	−3.188	−9.595 *	−6.669
	(4.686)	(1.710)	(2.124)	(3.724)	(7.067)	(9.749)	(4.610)	(1.795)	(2.305)	(4.757)	(5.471)	(8.896)
Voting rights	−143.1 **	−29.71	−4.957	−63.18	−102.2	−16.37	−211.7 ***	−37.16	−49.03	−75.15	−228.8 ***	−153.9
	(58.25)	(53.15)	(47.87)	(68.02)	(94.98)	(47.39)	(63.91)	(71.58)	(50.74)	(83.51)	(81.77)	(97.48)
Social capital	14.92	14.20	20.23	15.73	54.94	−35.14	39.62 *	24.66 *	27.71 *	45.06 *	66.53 **	−1.541
	(24.72)	(15.23)	(15.11)	(22.08)	(38.48)	(116.1)	(22.26)	(12.55)	(16.38)	(24.90)	(25.78)	(56.52)
Country	260.0 ***	67.33 **	100.3 ***	182.4 ***	295.5 ***	670.4 ***	291.9 ***	65.50 *	95.24 ***	159.8 **	250.1 ***	652.0 ***
	(39.08)	(28.09)	(30.80)	(41.19)	(71.07)	(201.5)	(73.25)	(34.41)	(36.20)	(68.54)	(69.09)	(107.1)
Founders' education							−29.00	−15.60	−24.08	−74.33	−70.16	−12.02
							(78.74)	(38.60)	(36.15)	(49.61)	(70.11)	(105.3)
Team size							69.40 **	10.17	17.65	38.30	63.94 *	86.49 *
							(27.13)	(12.29)	(12.76)	(23.65)	(34.71)	(46.85)
Constant	150.7 *	−25.28	−23.44	69.52	109.8	294.2	−114.4	−75.61	−76.14	−64.70	−28.74	−12.19
	(87.75)	(46.38)	(54.79)	(75.95)	(99.56)	(338.6)	(134.5)	(62.35)	(76.14)	(105.2)	(134.3)	(268.6)
Observations	118	118	118	118	118	118	116	116	116	116	116	116
R^2	0.167	0.076	0.101	0.161	0.155	0.141	0.245	0.108	0.150	0.213	0.231	0.210
Objective F.		25.76	57.58	92.47	94.07	58.22		24.62	54.92	86.42	86.46	55.72
MSS p-value		0.0203	0.00557	0.00357	0.0277	0.000829		0.0499	0.0144	0.00362	0.00502	0.00147

Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

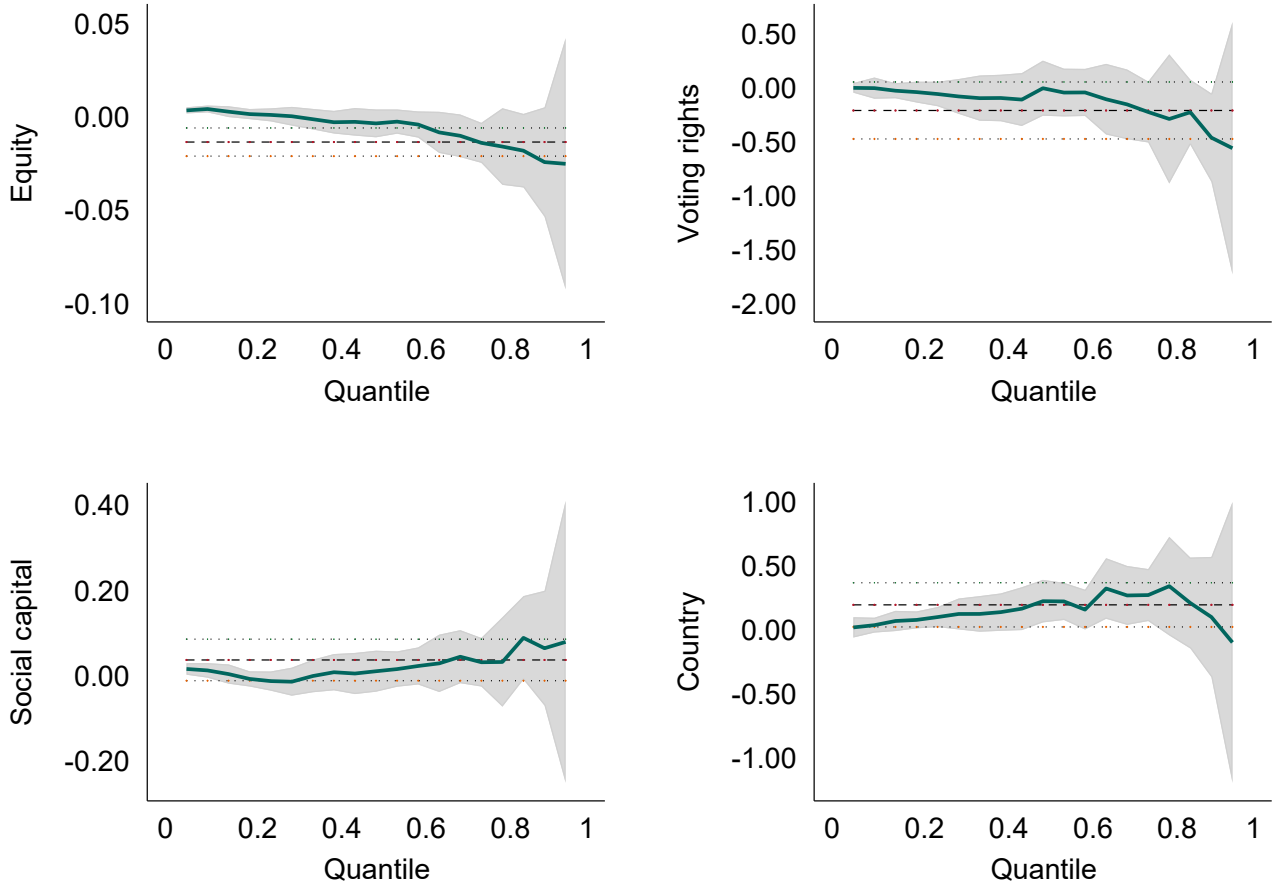

Figure A1. QR (green line and shadowed area) and OLS (dotted and dashed lines) coefficients and confidence intervals for each key regressor as q varies (regressions for overfunding level with control variables and for all campaigns).

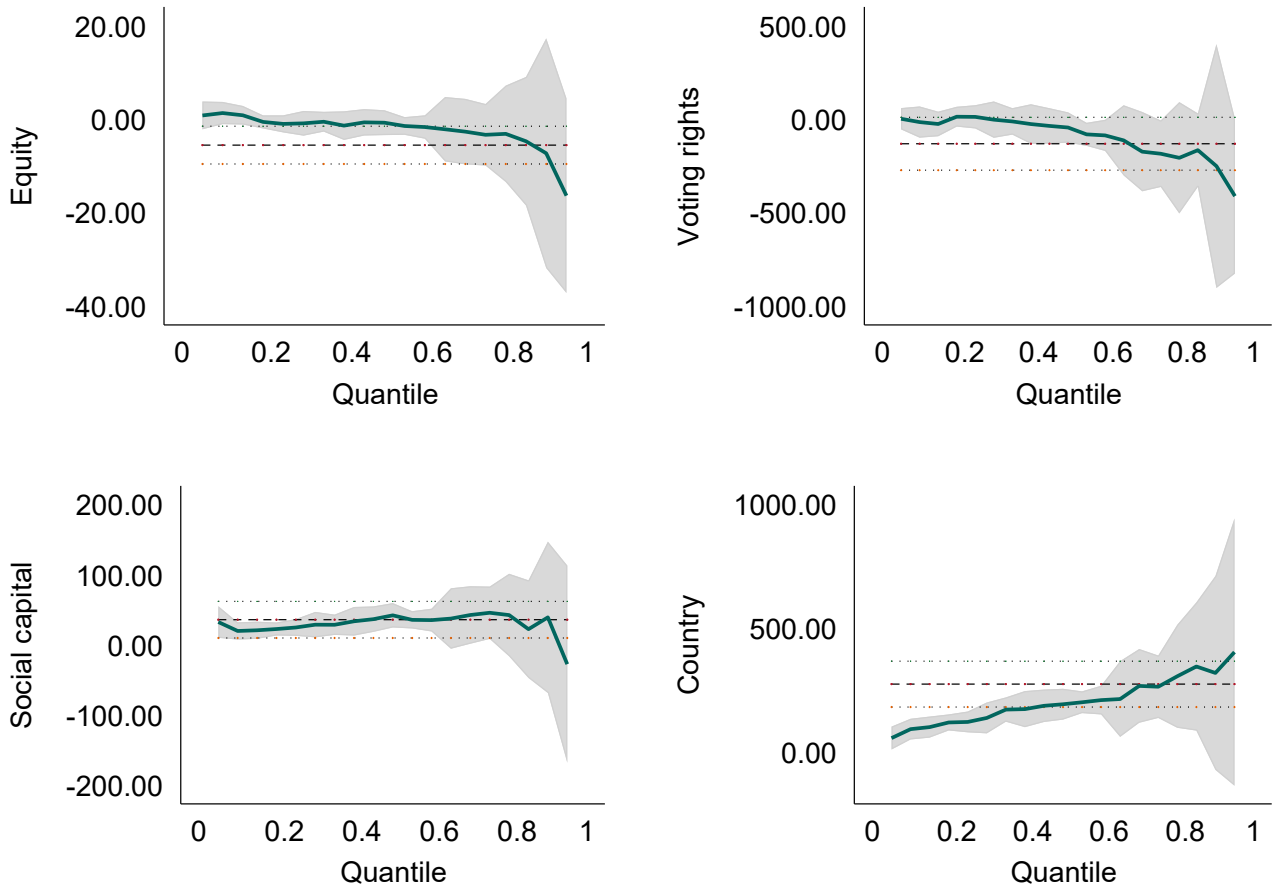

Figure A2. QR (green line and shadowed area) and OLS (dotted and dashed lines) coefficients and confidence intervals for each key regressor as q varies (regressions for # investors with control variables and for all campaigns).

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