Do institutional donors value social media activity and engagement? Empirical evidence on Italian non-profit grantees

Abstract

The paper examines whether social media *activity* and *engagement* of non-profit organisations affect the financial support received from institutional donors and their relationship with the latter. Data are collected using a survey of grantees that received at least one grant from a Foundation of Banking Origin (FBO) in the Italian context, and are supplemented with social media (i.e., Facebook and Twitter) data on non-profit grantees. The results show that the amount of financing provided by the FBO is positively associated with the grantee's social media *activity* and *engagement*. Moreover, the oversight exercised by the FBO is less constraining when the grantee reports higher social media engagement. Overall, our results provide novel evidence on the role of online sources of information, such as social media, on the grantor-grantee relationship and contribute to the recent debate on the importance of promoting digital communication and stakeholder engagement in non-profits.

1. INTRODUCTION

In the last decades, the economic and social impact of non-profit organisations (NPOs) on the global community has significantly grown (Connolly, Hyndman, & McConville, 2013). These organisations are highly heterogeneous in terms of size, type, scope and sector of operations and, thus, present a manifold landscape of organisational characteristics that result in different configurations and strategic approaches (Deegan & Islam, 2014; Goncharenko, 2019; Hall & O'Dwyer, 2017; Kuruppu & Lodhia, 2019).

Together with their growing role in the global community, NPOs have turned to a strategic use of social media to pursue a broad range of mission-related outcomes (Xu & Saxton, 2019). Social media are characterized by unique features in terms of content generation, reach, speed and the ability to establish a sense of community. Extant research shows that these technologies create new opportunities for innovation and improved transparency (Bonsón & Ratkai, 2013; Meijer & Thaens, 2010), facilitate dialogic accountability (Bellucci & Manetti 2017), and allow for better communication and engagement with stakeholders (Anagnostopoulos, Gillooly, Cook, Parganas, & Chadwick, 2017; Guo & Saxton, 2014; Lovejoy & Saxton, 2012; Lovejoy, Waters, & Saxton, 2012; Quinton & Fennemore, 2013; Svensson, Mahoney, & Hambrick 2015; Waters & Jamal, 2011). Xu & Saxton (2019), in particular, investigate how social media can generate value. They show how the existing link between social capital (Lin, 1999) and stakeholder engagement is substantiated through the strategic use of social media.

However, little is known about how social capital translates into tangible benefits such as financial capital and fundraising (Herzog & Yang, 2018). With few notable exceptions, the role of social media networks in the specific social capital outcome of monetary grants is understudied. Previous studies have focused on online donations by a heterogenous pool of donors as in crowdfunding events (Bhati & McDonnell, 2020; Saxton & Wang, 2014) or peer-to-peer fundraising (Castillo, Petrie, & Wardell, 2014).

On the other hand, the potential of social media in the context of a grantor-grantee relationship where the former is an institutional donor remains largely unexplored. The privileged position held by institutional donors among NPO stakeholders and their ability to influence and oversee grantees' operational agenda and performance (Chen, Dyball, & Harrison, 2020; Goncharenko, 2021) make their activity of paramount interest when studying the third sector.

Answering Xu & Saxton's (2019) call for further empirical evidence, we examine whether social media *activity* and social media *engagement*[1] are valued by institutional donors within a social capital perspective (Lin, 1999), and whether they translate into tangible benefits in terms of access to better funding and more efficient oversight. We focus on a specific type of institutional donors: the Foundations of Banking Origin (hereafter FBOs) in the context of Italy.

These institutional donors may rely on dedicated communication channels (Goncharenko, 2021) and preferred networks to obtain information on a specific grantee during the grant-making decision process. Yet, voluntary disclosure originated from the grantee's online channels may constitute a relevant, incremental signal and thus play a role in their final grant allocation decision.

Using a unique set of data, we examine whether the relationship between institutional donors (i.e., FBOs) and grantees is influenced by the NPOs' social media *activity* and *engagement*, and its consequences in terms of amount of the financial support received. Moreover, we study whether NPOs' stakeholder engagement realized through social media alleviates potential information asymmetries in the grantor-grantee relationship (Gandia, 2011; Sloan, 2009) and, as a consequence, mitigates the oversight imposed by institutional donors on grantees (Ostrander, 2007). Recent scandals in the non-profit sector contributed to intensify the demand for NPOs' accountability and transparency on part of donors (Cordery, Sim, & Zijl, 2017). Previous research highlights the weight NPOs might bear when control systems are perceived as coercive or punitive (Ebrahim, 2005), yet evidence on how NPOs respond to such pressure (Agyemang, O'Dwyer, Unerman, & Awumbila,

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[1] In line with Bhati and McDonnell (2020) we define social media *activity* as the original communication sent from the NPO grantee to the stakeholders via social media platforms (i.e., Facebook and Twitter), while social media *engagement* is the stakeholders' feedback response to the NPO's social media communication.

2017) are still scarce. We argue that, due to its inherent features of low cost, high versatility and connectedness (Saxton & Guo, 2015), the digital communication initiated on social media can constitute a twofold opportunity for NPOs, being it: i) a new, alternative disclosure channel to strategically address the information asymmetry in the relationship with their donor, and thus leverage endowments; ii) a visible arena to successfully engage with stakeholders and contemporaneously decrease the accountability need in the eyes of donors, thus lowering the cost of top-down imposed oversight.

We exploit a very specific regional setting constituted by NPOs (i.e., grantees) that received grants from FBOs (i.e., grantors) in the Italian context. FBOs main role is to allocate profits generated from financial investments towards activities of cultural interest, social inclusions and economic development. Existing research portrays FBOs as one of the main institutional donors in the context of Italy, also in light of the portfolios of assets that they manage (ACRI, 2019). In addition, FBOs show evolutionary patterns in terms of regulatory, economic and social environmental characteristics that are homogeneous, thus minimizing the biases associated with differences in any of these features. Data used in the study are collected through a survey administered to a sample of NPO grantees financed by Italian FBOs, and supplemented with data on social media *activity* and *engagement* that are hand collected from online and social media sources (i.e., Facebook and Twitter). Our unique dataset consists of 219 NPOs that received grants from FBOs in 2016.[2]

We find results that are consistent with a significant positive association between the social media *activity* of NPO grantees and the size of the grant received from the FBO. We also find similar results on the association between social media *engagement* and the amount of funding received. These findings suggest that FBOs value social media activity and engagement, and NPOs who invest in the strategic use of social media are rewarded with better financing.

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[2] The survey of NPOs grantees was compiled and administered in 2018.

Moreover, we find that NPO grantees who are able to successfully engage their stakeholders via social media are subject to less binding oversight requirements compared to their peers. This finding highlights another important dimension of the tangible benefits of social media stakeholder engagement.

In additional analyses, we investigate the main determinants of NPOs' social media *activity* and *engagement* and find that grantees whose endowment predominantly consists of private donations are more likely to i) post information on Facebook and Twitter, ii) engage with the social media public via like, shares, comments and retweets. Finally, we address a potential concern that our results might be driven by the maturity of the NPO grantee. In other words, the association between social media activity and funding success may be confounded by the implicit assumption that more mature organisations are also more active social media users. Consequently, the funding FBO may simply favour more mature NPOs in the grant-making decisions at the expense of younger entities. We address this concern and show that our inferences remain unaltered across NPOs' age quartiles, consistent with the youngest grantees equally benefitting from social media activities to access better FBOs funding.

We contribute to the literature in the following ways. First, we provide novel evidence on whether *institutional* donors value the grantees' social media networks, in the context of the grant-making process. While previous studies focused on an heterogenous pool of donors, with the risk of failing to isolate potential effects driven by donor-specific characteristics, we concentrate on a homogenous set of institutional grant-making foundations, namely the FBOs, which are highly specialised and homogenous actors. Our results provide the first empirical evidence on the relationship between social media *activity* and *engagement* and fundraising success for non-profits in the context of Italian FBOs. More specifically, our findings show that FBOs reward the grantees' social network capital by allowing for a larger share of funds to be allocated, and provide a case for how such social capital can be transformed into tangible benefits. We build on the social capital perspective (Lin, 1999, Xu & Saxton, 2019) and add to the literature on the strategic use of social

media by NPOs, and more specifically on fundraising and social media stakeholder engagement (Bhati & McDonnell, 2020; Castillo et al., 2014; Saxton & Wang, 2014).

Second, we explore another dimension of the tangible benefits associated with social media stakeholder management and social network capital. The oversight exercised by the donor can be perceived as constraining and have negative impact on the efficient and effective use of resources (Ostrander, 2007). We examine institutional donors' oversight in the context of social capital and social networks, and provide new evidence on the positive association between social media engagement and less binding NPO oversight required by the FBO. The establishment of a successful dialogic relation with NPO's stakeholders via social media may act as a mechanism to reduce external accountability needs, and thus mitigate the donor's oversight incentives. Moreover, this study expands previous literature on the information asymmetry between non-profits and their donors (Sloan, 2009), by providing evidence of a substitution effect between online social control and oversight required by the grantor.

Finally, in terms of practical contributions, the study provides useful insights to foundation members, non-profit organisations and practitioners who are interested in broadening their understanding of the strategic use of social media in the grantor-grantee relationship. The implications of this study are particularly relevant to NPO's executives and members who are in charge of assessing the benefits associated with opening and maintaining a social media account as well as establishing a social media policy.

The paper is structured as follows: Section 2 presents the institutional background and hypotheses; Section 3 describes the sample, data and methodology; Section 4 illustrates the empirical results; Section 5 concludes.

2. INSTITUTIONAL BACKGROUND AND HYPOTHESES DEVELOPMENT

2.1 Italian Foundations of Banking Origin (FBOs)

FBOs were created during the early 90s when the Italian government decided to privatize the public banking sector with the aim of separating the banking activity from the philanthropic action.[3] Their role is to allocate profits generated from financial investments to social interest activities. Their investment decisions are independently exercised, in terms of choice of beneficiaries and grant-making decision. As philanthropic foundations, they are not bound to the government and represent a particular source of support for third sector initiatives, mediating between the state and the citizens (Bellucci & Manetti, 2017). The regulation that disciplines these foundations requires them to pursue missions of social utility and promotion of economic development, operating in compliance with the principle of economy and obtaining adequate profitability from the asset management. Since their creation, FBOs have undergone a process of progressive reorganisation that affected their own governance structure and required to establish effective and efficient oversight mechanisms on their grantees (ACRI 2019).

Italy counts a total of 88 FBOs which together represent the largest and most relevant institutional donors in the country. Italian FBOs are well-endowed grant-making institutions that can rely on significant financial resources (Barbetta, 1999). In 2019, FBOs managed financial portfolios worth 39.6 billion euro and recorded social expenditure, in the form of grants allocation, for almost 1.1 billion euro (ACRI, 2019).

FBOs lend us an ideal research setting to study the relationship between non-profit grantees and institutional donors where homogeneity is pervasive. FBOs in fact show similar evolutionary patterns in terms of regulatory, economic and social environmental characteristics that are homogeneous, thus minimizing the biases associated with any of these differences. This represents a crucial feature of our design, especially in light of recent research on social media and fundraising

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[3] FBOs were created with the Italian law no. 461 of December 23rd, 1998 (the so-called "Ciampi law"). The subsequent legislative decree no. 153 of 1999 was intended to significantly change their structure.

success which focuses on heterogenous donors (Bhati & McDonnell, 2020; Lovejoy & Saxton, 2012) with the risk of failing to isolate potential effects driven by donor-specific characteristics.

The majority of FBOs focus their grant-making activities on the communities in which they are located, operating at the regional and/or city level. FBOs are well integrated in the geographical background of the grantees' operations, increasing the likelihood of sharing an accurate knowledge of the grantees' stakeholder context. In addition, the privileged position held by institutional donors among NPO stakeholders and their ability to influence and oversee grantees' operational agenda and performance (Chen et al., 2020; Goncharenko, 2021) make their role of paramount interest when studying the third sector.

2.2 NPOs social media activity and engagement

NPOs are highly heterogeneous in terms of size, type, scope and sector of operation and thus confront a multitude of financial and management challenges. To carry out their projects, NPOs are usually looking for new forms and sources of financing and support, which can involve taking advantage of social media and other on-line opportunities (Saxton and Wang, 2014).

Given the widespread popularity of websites and social media, such as Facebook and Twitter, it is not surprising that NPOs utilise these platforms to disseminate information and engage with their stakeholders (Bahati & McDOnnell, 2020; Lovejoy et al., 2012; Nah & Saxton, 2013; Svensson, Mahoney, & Hambrick, 2015; Waters, Burnett, Lamm, & Lucas, 2009). However, whether and how these organisations use internet-based technologies remains understudied in academic research (Dumont, 2013; Guo & Saxton, 2014; Seo & Vu, 2020).

Previous studies have shown that websites and social media define innovative spaces for NPOs to foster their transparency and new forms of accountability, finding great variability in the extent to which NPOs exploit internet opportunities (Dumont, 2013; Saxton & Guo, 2011). Moreover, social media are seen as functional to develop new forms of communication and engagement with the public (Bellucci & Manetti, 2017¸ Xu & Saxton, 2019).

Yet, the increased availability and affordability of information technology does not always result in non-profits fully exploiting their potential (Seo & Vu, 2020). Indeed, non-profits' adoption and use of social media can vary, depending on the characteristics of the organisation as well as the demographics of the individuals working at it (Curtis et al., 2010; Guo & Saxton, 2014; Nah & Saxton, 2013; Seo, Kim, & Yang, 2009).

Xu & Saxton (2019) emphasize NPOs' strategic design of social media and call for strategic considerations of the return on investment of their use, given the information disclosed on the internet may positively affect the funds collected as a result of increased trust and credibility (Gandia, 2011).

Donors will possess varying amounts of information about the NPO they consider supporting, and to this end, they may want to learn about its profile, its activities and scope, and its accountability. Incomplete information on part of the donors translates into information asymmetry, especially when NPOs selectively withhold negative information while overemphasising positive news (Sloan, 2009). Mandatory reporting requirements of NPOs are far from complete, thus to improve information transparency some NPOs resort to voluntary disclosure of information as typically done by for-profit firms[4] (Gandia, 2011). To this end, internet-based technologies have led to a progressive ability of organisations to disclose financial, operational, and environmental information. Recent research also sheds light on other types of information that can be disseminated through social media and official website - such as news related to political, environmental, health issues, initiatives and their promotion - or through forums and blogs that allows a dynamic exchange with stakeholders (Bellucci, Simoni, Acuti, & Manetti, 2019).

NPOs can thus leverage public disclosure made through social media platforms in an attempt to increase their transparency and make themselves publicly known and accountable. By disclosing details of their operation and social performance, NPOs are able to provide relevant information that is key to donors to make their funding decision on the organisation (Keating & Frumkin, 2003), as

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[4] A review of the extensive disclosure literature has been provided by Healy & Palepu (2001).

well as demonstrate their responsiveness to stakeholders, and fulfil their societal function by providing evidence they are responsibly targeting their social mission (Saxton & Guo, 2011).

In the context of this research, we analyse a specific set of institutional donors, the FBOs, that are characterized by very unique features (Boesso & Cerbioni 2019; Boesso, Cerbioni, Menini, & Parbonetti, 2017; Letts, Ryan, & Grossman, 1997). On the one hand, FBOs may rely on dedicated communication channels (Goncharenko, 2021) and preferred networks to obtain information on a specific grantee during the grant-making decision process. On the other hand, public voluntary disclosure originated from a grantee's online channels may constitute a relevant signal and thus play a role in the final allocation decision. Grantees, in fact, may rely on their social media accounts to disseminate relevant information and initiate public conversations vis-à-vis their peers[5], with the effect of mitigating the level of information asymmetry,[6] thus increasing their attractiveness and the chances of obtaining higher funding (Gandia, 2011).

To date, there is no evidence on how NPOs that are funded by institutional donors such as FBOs take advantage of social media (i.e., Facebook and Twitter). In this context, our objective is to analyse the social media activity of Italian NPOs and the effect that the dissemination of information initiated on the online channel has on their fundraising success (i.e., grant amount received). To this end, we define social media *activity* as the original communication sent from the NPO to the stakeholders via social media platforms, considering the latter as real-time dialogic communication channels that connect organisations with their stakeholders (Chua, Goh, & Ang, 2012; Manetti & Bellucci, 2016). Specifically, social media *activity* is here defined as the initiation of the online communication process originated from the NPO (Bhati & McDonnell, 2020).

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[5] This may be the case especially when formal selection procedures, like public competitions, are in place, as peer competition may influence voluntary disclosure (Li, 2010).

[6] The concept of information asymmetry is found in the economic literature, primarily with respect to the transaction theory developed by Oliver E. Williamson (1975) and it is a component of the principal-agent theory (Alchian & Demsetz, 1972). Further studies in accounting have shown that voluntary disclosure reduces information asymmetry with positive outcomes on liquidity and the cost of capital (e.g., Botosan, 1997; Diamond and Verrecchia, 1991).

We hypothesize that, from the institutional donors' perspective, additional information originated from the NPO and gathered via social media may have incremental value and influence their decision on how much funding should be allocated to a specific NPO grantee. Thus, we posit our first hypothesis as follows:

Hypothesis 1: There is a positive association between the grantee's social media activity and the amount of funds granted by the FBO.

Social media is distinguished from other information channels in its content generation, reach, speed and a sense of "community," among other things. Due to its peculiar nature, social media show incredible potential as a stakeholder engagement channel for the reason that it allows one party (i.e., the NPO) to interact with another (i.e., the stakeholders) in a continuous and direct exchange, whereby both parties can learn from these interactions (Manetti, 2011). As a result, stakeholder engagement represents a powerful dialogic tool (Bebbington, Brown, & Frame, 2007; Brown & Dillard, 2013) that can promote transformative action and social change. Moreover, it represents a necessary feature for reporting relevant information according to the expectations of stakeholders, particularly to the extent that non-financial accountability is concerned.

With the success of NPOs' mission being increasingly tied to their ability to create a "community" that is beyond physical, social media provide a visible arena for engaging stakeholders and catalysing public dialogue (Svensson et al., 2015). Existing research suggests that greater interactions with the online audience may be helpful to NPOs for fundraising by raising awareness of community problems and fostering policy dialogue (Xu & Saxton, 2014). In particular, the visibility and exposure that stakeholder engagement creates around NPOs represents a significant opportunity for the latter to leverage donations and funds. The ability to build quality relationships with donors, clients, grant makers and the overall public is crucial to NPOs' success. Xu & Saxton (2019) argue that successful stakeholder engagement through social media – and its desired organisational outcomes - can be achieved through the development of social capital. Non-profits' social capital,

thus, comprises the resources embedded in these strategic alliances and stakeholder relationships (Doerfel, Atouba, & Harris, 2017).

The dialogic nature of social media platform encourages real-time stakeholder feedback that spurs the development of two-way conversations at the foundation of stakeholder relationships (Chua et al., 2012; Manetti & Bellucci 2016). We expect institutional donors to value the development of social capital through stakeholder engagement, and reward successful NPOs with access to better funding.

To this end, we define social media *engagement* as the stakeholders' feedback response to the NPO's communication via social media (Bhati & McDonnell, 2020). Following this reasoning, we posit our second hypothesis as follows:

Hypothesis 2: There is a positive association between the grantee's social media engagement and the amount of funds granted by the FBO.

2.3 NPOs social media use and FBOs oversight

Accountability is necessary to promote public trust in the third sector. Since FBO's own success highly depends on the outcomes of their grantees' projects, foundations are likely to be at least as concerned about delegating as owners are in the for-profit sector (Boesso et al., 2017), and therefore incentivised to oversee their grantee's actions. Oversight implies that foundations do not just offer advice, but rather join, guide and directly evaluate the NPO grantee in its decision-making process. As institutional donors, FBOs are key non-profit stakeholders and, as such, they have the power to demand donor-imposed reporting in addition to official information disclosures to meet specific accountability demands (Goncharenko, 2021).

On the one hand, similar to any form of support provided, oversight may benefit NPO grantees and eliminate the inefficiencies of their learning process. On the other hand, however, existing literature (Delfin & Tang, 2008; Ostrander, 2007; Dekker, 2004) suggests that oversight is a complex concept, which may not necessarily have positive consequences on the grantor-grantee relation.

Dekker (2004) argues that formal control mechanisms such as reporting and performance monitoring may either harm or benefit trust, which is crucial to the grantor-grantees relationship. An extensive use of control mechanisms may instigate a lack of belief in one's competences and therefore result in a damaging effect on relational trust, or even frustration within an organisation. In addition, upward control may distort the perception of non-profits' priorities (Agyemang et al., 2017) and transform accountability and monitoring actions into coercive or punitive ones (Awio, Northcott, & Lawrence, 2011). Moreover, Ostrander (2007) expresses concern over donors' control over grantees, as the recipients have less and less discretion over the most efficient and effective use of these needed resources.

However, there are other accountability mechanisms previously researched that are less likely to be perceived as unilaterally imposed. According to Brown (2009), the public dialogue activated through stakeholder engagement effectively informs accountability relationships between an organisation and its stakeholders. Thus, stakeholder engagement can contribute to NPOs' accountability through increased interactions (Manetti & Bellucci, 2016). To this end, social media offer a vast array of opportunities for NPOs to mobilise and engage with the public quickly, efficiently, and at low costs (Seo & Vu, 2020).

The ability to create public engagement and trust on social media can enhance an organisation's legitimacy and increase its accountability to the general public, thus elevating its image and perception in the eyes of donors. The establishment of a successful dialogic relation with the NPO's stakeholders via social media may act as a mechanism to reduce external accountability needs, and mitigate of the oversight incentives of the donor. In this sense, social media *activity* alone may not provide enough evidence to assess the success obtained in engaging with the stakeholders. On the contrary, social media *engagement* gauges the full dimension of the two-way communication, and it is more suitable in the context of accountability (Bellucci & Manetti, 2017).

Thus, we ask whether greater social media *engagement*, as compared to social media *activity*, can mitigate the oversight imposed by the grantor, and we posit our third hypothesis as follows:

Hypothesis 3: There is a negative association between the grantee's social media engagement (versus social media activity) and the oversight imposed by the FBO on the grantee's activities.

3. DATA AND METHODOLOGY

3.1 Data Collection

This study employs a unique set of data collected from a survey submitted to a sample of Italian grantees financed by FBOs, and supplemented with additional data hand collected from online sources and social media.

We started by collecting the list of NPO grantees' names and related information from FBOs' 2016 Annual Reports. Within this sample of grantees, we identified 1,211 potential responders that in 2016 received grants of amount equal to 2,000 euros or more, so to minimize the risk of observing relations with no-more-than-minimal interactions. We used the survey to gather information regarding NPOs i) demographic characteristics, ii) size and performance, iii) funding frequency and sources, iv) relationship with the FBO and any oversight mechanism in place. Thus, we asked respondents to answer a series of questions related to the abovementioned aspects.

The questionnaire was sent to respondents in October 2018 and remained available online for a month. Four reminders were sent during this period. We received 242 complete questionnaires from non-profit organisations financed by 26 Italian FBOs (30% of the FBO population), yielding a response rate of 20 percent. However, some of the responders did not complete the entire questionnaire, therefore, our final sample includes 219 organisations with all non-missing items. Among the 26 FBOs represented in our sample, 8 are classified as large foundations, 6 as medium-large, 3 as medium-sized, 7 as medium-small, and 2 as small.

To measure social media activity of NPO grantees, we focus our analysis on Facebook given its widespread popularity among NPOs. In parallel, we also analyse Twitter activity, although this social media is less common among the organisations in our sample. We started by manually searching each NPO's social media profile. We extracted its official Facebook (Twitter) handle and the date of creation of each account as reported at the top of the each account page. To collect social media *activity* and *engagement* we used a web-based library of social media posts and social media analysis software platform which provides access to full Facebook (Twitter) historical activity.[7]

We input each NPO's social media profile in the platform and launched individual searches to retrieve social media activity and engagement in the period of interest.[8] Specifically, we collected the daily original Facebook posts published, the shares of Facebook posts, the comments made by users on each organisation's post, the daily original tweets posted by the organisation and the of daily retweets received during the period of interest.

In addition, we manually searched each organisation on Google and collect information regarding its official website (i.e., whether it has one or not). We then employed an internet archive software[9] to retrieve the initial creation date of each websites and any subsequent update.

3.2 Measures

To test our first hypothesis, we examine the relationship between the NPO grantees' social media *activity* and the amount of funding received from the institutional donor (Bhati and McDonnell, 2020). Our main variables of interest are: *Posts per day*, which is the average number of Facebook posts per day (i.e., the total number of Facebook original posts in 2015 scaled by 365) published by

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[7] We retrieve Facebook and Twitter data through an online web-analytics tool (*https://www.fanpagekarma.com/*) which provides access to the time series of social media activity in selected time periods, as well as users' activity and other metrics related to social media profiles.

[8] We focus our analysis on grants received by Italian NPOs in 2016. Thus, we collect social media data for 2015, which is the year preceding the funding allocation decision, and consistent with the direction of the effect we aim to investigate (i.e., effect of social media activity and engagement on subsequent grant amount).

[9] We use the "wayback machine" software available at http://web.archive.org/. Wayback Machine is a web-based internet archive that allows to capture, manage and search collections of digital content, including websites' initial creation dates and subsequent modifications, copyrights and updates.

the grantee during the year before the grant was received; *Tweets per day*, which is the average number of original tweets (i.e., the total number of original tweets in 2015 scaled by 365) published by the grantee during the year before the grant was received.

Our main dependent variable is the size of the grants received (i.e., *Grant amount*). *Grant amount* is calculated as the natural logarithm of the grant value as reported in the official annual reports of each FBO. We control for the frequency of past grants received from institutional donors (i.e., *Grant frequency),* which is measured in our questionnaire by asking respondents to assess the extent to which the organisation has received funding from a FBO over the previous three years (with 2018 being the period when the survey was administered). This item is rated on a 7-point Likert scale and normalized so it takes values comprised between 0 and 1[10]. To ease the interpretation, we transform the original scale from 1 to 7 into a scale from 0 to 1, assuming the following values: 0, 0.167, 0.334, 0.50, 0.667, 0.8334, 1.

To examine the role of social media users' *engagement* in the institutional donor-grantee funding relationship, our second hypothesis, we use variables that capture the average number of *Likes per post* (i.e., the total number of likes on Facebook posts in 2015 divided by the total number of posts in 2015), *Shares per post* (i.e., the total number of shares of Facebook posts in 2015 divided by the total number of posts in 2015), *Comments per post* (i.e., the total number of comments on Facebook posts in 2015 divided by the total number of posts in 2015), and *Retweets per tweet* (i.e., the number of retweets on Twitter in 2015 divided by the total number of tweets in 2015).

We then employ measures of the maturity of NPOs' online platforms: *Facebook age, Twitter age,* and *Website age*. The age of Facebook, Twitter and the website are calculated as the difference between 2016 (i.e., the year in which the NPO received the grant) and the year in which the grantee's social media (website) were initially created. Our main dependent variable is, once again, the size of the grants received (i.e., *Grant amount*).

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[10] The specific question reported in the survey was: "How often has your organisation received funding or contributions from a FBO over the past three years? (1 never - 7 very often)".

To test our third hypotheses, we examine the extent to which mechanisms are put in place by the FBO to monitor the grantee's operations and performance, and use it as dependent variable to proxy for the level of *oversight*. Specifically, we test whether social media *engagement* (versus social media *activity*) can play a significant role in mitigating the grantee's accountability requirements, and thus substitute for the imposed oversight. Building on CEP (2017), we measure our dependent variable, *oversight*, using NPO grantees' perceptions as their voices are often missing from academic research (Delfin & Tang, 2008). The extent to which FBOs monitor NPO grantees is measured on the basis of the scores assigned by respondents when asked to assess several actions and activities to which they are subject.

The literature shows that institutional donors can exercise oversight in different forms and at different levels (Coyte et al., 2013; Delfin & Tang, 2018; Goncharenko, 2021). Consistently, we asked respondents to indicate to what extent each of the following five items has been required by the FBO's supervision (Buteau, 2015): i) Input indicators (resources used to carry out the intervention i.e., financial resources, equipment, technical skills, personnel); ii) Activity indicators (what has been done with those resources i.e., services provided, individuals reached, involved); iii) Output indicators (how the activities impact the grantee immediately, i.e., number of satisfied people, services delivered successfully); iv) Outcome indicators (improvements in the quality of life of the individual or grantee in the medium to long term); v) Impact indicators (part of the outcome attributable exclusively to the work of the organisation). *Oversight* is measured as an index variable ranging from 0 to 5, where 0 represents the absence of oversight and 5 strict oversight. It is calculated as the sum of the five different index variables, each normalized between 0 and 1, and taking intermediate values (according to the grantee's answers) on a scale from 0 to 6.

Following previous research (e.g., Bhati & McDonnell, 2020; Mitchell, 2014), our models also include a number of control variables as reported in Appendix A.

3.3 Regression models

To test our first hypothesis, we examine the association between social media *activity* initiated by the NPO grantee and the grant amount received by the FBO. Thus, we run the following OLS model:

$$Grant\ Amount_{i,t} = \alpha + \beta_1\ Social\ media\ activity_{i,t-1} + \beta_2\ \Sigma Controls_{i,t} + \varepsilon_i \qquad (1)$$

where the dependent variable is *Grant Amount* and the independent variables measure social media activity. More specifically, we use *Posts per day[11]* (i.e., the average number of Facebook posts per day) and *Tweets per day* (i.e., the average number of Tweets per day on Twitter), respectively. We control for relevant Facebook, Twitter, and website characteristics such as their age (*Facebook Age*, *Twitter Age*, *Website Age*). Following previous research (Xu and Saxton, 2019), we include controls for the NPO size, proxied by the number of employees and volunteers (*N Employees*, *N Volunteers*), and performance (*Revenue*). Moreover, we control for the organisation reliance on bank financing (*Bank*), the frequency of past grants received from FBOs (*Grant Frequency*), whether the NPO executive is highly involved with the FBO (*Exec Involvement*), and the NPO maturity (*Age*).

Since a single FBO could be financing multiple grantees at the same time, the standard errors are clustered at the FBO level. This way, we correct for any common unobserved random factor at the foundation level that could lead to correlation between observations. We also include i) organisation types and ii) FBO fixed effects.

To test our second hypothesis, we examine the association between our measure of social media *engagement* and the grant amount received from the FBO. Thus, we run the following OLS model:

$$Grant\ Amount_{i,t} = \alpha + \beta_1\ Social\ Media\ Engagement_{i,t-1} + \beta_2\ \Sigma Controls_{i,t} + \varepsilon_i \qquad (2)$$

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[11] In our models, the independent variables are lagged on year with respect to the dependent variable to partially alleviate potential concerns over the direction of the relation.

where the dependent variable is *Grant Amount* and the independent variables are measures of Facebook and Twitter users' engagement (i.e., *Likes per post*, *Shares per post*, *Comments per post, Retweets per tweet)*. We employ the same set of control variables as described above.

Last, to test our third hypothesis, we examine the association between our proxies of social media *activity* and *engagement* and the oversight level implemented by the FBOs. Thus, we run the following OLS model:

$$Oversight_{i,t} = \alpha + \beta_1 \; Social \; Media \; Engagement_{i,t-1} \; (Social \; Media \; Activity_{i,t-1}) + \\ \beta_2 \; \Sigma \; Controls_{i,t} + \varepsilon_i \tag{3}$$

In this model, we also include *Grant Amount* as an additional control variable to account for FBO higher incentive to strictly monitor the grantee when large grants are paid out.

3.4 Sample and Summary statistics

Our final sample includes 219 observations with all non-missing dependent and control variables (Table 1).[12] The sample includes different types of non-profit organisations: social promotion associations (22.37 percent), voluntary organisations (15.53 percent), associations (25.57 percent), social cooperatives (19.18 percent) and operating foundations (17.35 percent). The organisations operate primarily in the fields of arts and culture (38.36 percent), education (14.16 percent), healthcare (20.55 percent), and volunteering (10.05 percent).

[INSERT TABLE 1 ABOUT HERE]

Table 2 reports descriptive statistics for the variables included in the models. Data related to the NPOs' demographic, funding, performance and the relationship with the FBO are taken from the

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[12] The sample includes 68 observations when using Twitter measures (i.e., *tweets per day* and *retweets per tweet*) as fewer NPOs have a Twitter account and use it.

questionnaire administered to grantees. Data on social media (i.e., Facebook and Twitter) are hand collected from online and social media sources.

The average absolute size of the grant is 67,946 euros, however there is a lot of variation with a minimum value of 2,000 euros and a maximum of 3,500,000. For the purpose of our analysis, we use the natural logarithm of the grant size (i.e., *Grant Amount)* which has a mean value of 9.84. The average value of the level of oversight is 2.36.[13] The Average number of *Posts per day* is 0.33, while the average number of *Likes per post* is 20.41, *Shares per post* is 6.01 and *Comments per post* is 0.51. The average number of *Tweets per day* is 0.56, while *Retweets per tweet* is 0.93.

The NPOs' official Facebook profile is on average 2.82 years old, while the average age of the website and Twitter profile are 6.76 and 0.80 years, respectively.[14] Our controls for size include: *N Employees* and *N Volunteers.* We also control for NPO's performance by using the amount of revenues (i.e., *Revenue).* In our sample, 69 percent of non-profit organisations employ fewer than ten workers (average 0.17), and 68 percent have less than 20 volunteers (average 0.30). Moreover, 31 percent declare revenues below 50,000 euros, 14 percent between 51,000 and 100,000 euros, 26 percent between 101,000 and 500,000 euros, and 29 percent above 500,000 euros. The average *Executive Involvement* and *Age* of the organisations are 23.00 percent and 19.24 years, respectively. On average grantees' total funding is made for 29.82 percent of *Private Donations*, 31.74 percent of funds are from *Public Financing,* 7.21 percent from *Membership Fees,* and 7.77 percent from *Sponsorships.*

[INSERT TABLE 2 ABOUT HERE]

Table 3 presents the Pearson correlation coefficients for the main variables used in the empirical analyses. The correlation table shows that *Grant Amount* is positively and significantly

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[13] Oversight is an index variable with values comprises between 0 and 5. It is composed as the sum of 5 different variables, referring to different dimensions of oversight, each taking values on a scale from 0 to 6 and normalized between 0 and 1.
[14] Our measures of social media and website age are set as of 2016, which is the year when the grant amount was received.

correlated with our measures of social media *activity* and *engagement*, suggesting that Facebook (Twitter) *activity* and *engagement* are positively associated with the grant amount received by the FBO.[15]

[INSERT TABLE 3 ABOUT HERE]

4. Empirical results

4.1.1 Main results

To test our first hypothesis, we examine the association between the grant amount and our measures of Facebook and Twitter activity initiated by the grantee. FBOs may rely on different sources to obtain information about the grantee during the grant-making decision process. Voluntary disclosure originated from the grantee's social media channels may constitute a relevant, incremental signal with the potential of alleviating the level of information asymmetry in the grantor-grantee relationship. Thus, from an institutional donor's perspective, we expect that the real-time dialogic communication originated from the NPO on social media positively influences their decision on how much funding should go to a specific grantee.

Table 4 reports the regression results. In Column 1, we use *Posts per day* as our main measure of Facebook *activity* initiated by the NPOs and find a positive and significant result, suggesting that the grantee's social media activity has a beneficial impact on its ability to attract higher funding from the FBO. We also find a positive and significant association between the amount of the grant and the grantee's performance (*Revenue*) as well as the executive involvement (*Exec Involvement*), which is consistent with a substantial flow of donations reaching high performing organisations and

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[15] In untabulated correlation analysis, while *Facebook Age* and *Website Age* are significantly correlated with the grantee's *Age*, results show no correlation between the grantees' *Age* and *Posts per day*, *Tweets per day* or our measures of social media engagement. This absence of correlation provides a reassurance to the potential concern that our results might be driven by the age of the grantee, that is grantees with higher social media activity (engagement) are the more mature and experienced and thus the ones with a higher likelihood of receiving larger grants by FBOs.

organisations where there is a closer relationship with the FBO at the executive level. Finally, the amount of the grant is lower when the grantee receives frequent bank lending, consistent with FBOs discriminating their funding choice based on NPOs' risk profile. In Column (2), we use *Tweets per day* as our main variable of interest and, consistent with earlier results, we find a positive and significant coefficient, suggesting that the grantee's activity on Twitter also has a beneficial impact on the funding amount granted by the FBO.

[INSERT TABLE 4 ABOUT HERE]

4.1.2 Main results: social media engagement and grant amount

To test hypothesis 2, we further examine whether the grantee's social media *engagement* has a positive effect on the amount of funding received by the FBO. Given the success of non-profits' mission is increasingly contingent on their ability to foster a "community" that is beyond physical, social media provide an effective tool for engaging stakeholders and catalysing public dialogue (Svensson et al., 2015). The ability to build quality relationships with donors, clients, grant makers and the overall public is fundamental for NPOs' success and, to this end, the dialogic nature of social media encourages real-time stakeholder feedback that spurs dynamic conversations. Thus, we expect institutional donors to value this dimension, and reward successful NPOs with access to better funding.

We report the results of this analysis in Table 5. The dependent variable is *Grant Amount* and our main variable of interest is social media *engagement*, proxied by Facebook and Twitter engagement variables. Since the latter are highly correlated, to alleviate multicollinearity concerns we include one variable at a time in separate specifications. Thus, we use *Likes per post*, *Shares per post*, *Comments per post, and Retweets per tweet* as alternative measures of social media engagement in Column 1, 2, 3, and 4, respectively.

Overall, we find positive and significant coefficient across all four specifications, consistent with our conjecture that the FBO is more likely to grant higher amount of funding to those grantees who are successful in engaging stakeholders on the social media platforms. Interestingly, the coefficients on *Facebook Age* and *Website Age* are also positive and significant, suggesting that NPOs with a more established web and social media presence are more likely to attract larger grants.

[INSERT TABLE 5 ABOUT HERE]

4.1.3 Main results: social media activity versus engagement and oversight

To test our third hypothesis, we examine the association between the level of oversight implemented by the FBO during and after the project is completed and our proxies for social media *activity* and *engagement*. Given FBO's own success highly depends on the outcomes of their grantees' projects, foundations are likely incentivized to oversee their grantee's actions. Institutional donors, such as FBOs, may require financial reporting in addition to non-financial disclosures to meet accountability demands (Goncharenko, 2021). We argue that the ability to create public engagement and trust on social media can enhance an organisation's legitimacy and increase its accountability to the general public, thus elevating its perception in the eyes of donors and mitigating the oversight incentives of the latter. On the contrary, social media *activity* alone may not provide enough evidence to assess the success obtained in engaging with the stakeholders.

Table 6 reports the results of this analysis for Facebook. The dependent variable is *Oversight* (Columns 1-4) and our main variables of interest are *Posts per day* (column 1), and the three measures of social media *engagement* (*Likes per post*, *Shares per post*, and *Comments per post*, Columns 2-4).

Consistent with our expectations, while we find no significant association between Facebook *activity* measured with *Posts per day* and oversight (Column 1), we do find a negative and significant association between social media *engagement* and oversight (Columns 2-4). This suggests that FBOs'

impose lighter scrutiny on grantees that are more successful in engaging their stakeholders through Facebook. Interestingly, the negative and significant coefficient on *Website* suggests that softer oversight conditions are also applied to grantees that are active online and maintain an official website. Similarly, oversight appears to be less binding when the organisation's executive is more involved with the institutional donor (*Exec Involvement).* On the contrary, the organisation's size, proxied by *N Employees,* is positively and significantly associated with *Oversight* in almost all specifications, consistent with larger NPOs being subject to more binding control mechanisms.

[INSERT TABLE 6 ABOUT HERE]

In Table 7, we examine the association between the oversight level implemented by the FBOs during and after the project is completed and our proxies for Twitter *activity* and *engagement*. While in Column 1 the coefficient on social media activity (*Twitter per day*) is not significant, confirming our expectations, Column 2 shows that social media engagement via Twitter appears to have no significant association with *Oversight*. This result suggests that Facebook may be the preferred social media used by FBOs to assess their grantees' stakeholder engagement. However, we caution the interpretation of this result, given it may be likely attributable to the small sample size.

[INSERT TABLE 7 ABOUT HERE]

4.2 Additional Analyses

In additional analyses, we investigate the determinants of a grantee's social media *activity* and *engagement* either on Facebook or Twitter. In line with previous literature (e.g., Xu & Saxton, 2019; Saxton & Wang, 2014), we view social media as more innovative and informal communication channels, easier to be managed and updated by the grantee, that better appeal to private donors as

compared to the public administration. We expect NPO grantees who highly depend on *Private Donations* (i.e., private donations larger than 50% of the overall budget) to invest more in social media activity and engagement. On the contrary, as public sector administrations are more likely to gather information about potential grantees through more traditional official channels, we do not expect this association to be significant for those grantees that mainly rely on public funds (*Public Financing*).

In line with our expectations, in Table 8, we show that the reliance on private donations is significantly associated with higher social media *activity* and *engagement* on Facebook.

[INSERT TABLE 8 ABOUT HERE]

Likewise, in Table 9, we show similar results for social media *activity* and *engagement* on Twitter. Consistent with our conjecture, we find that the reliance on both private donations and membership fees is associated with a higher number of *Tweets per day* and *Retweets per tweet*.

[INSERT TABLE 9 ABOUT HERE]

4.3 Robustness Checks

In Table 10, we test the robustness of our main results (Table 4) to the concern that they might be driven by the maturity of the grantee. In fact, one could argue that NPO grantees who engage more in social media activity are the more established and experienced ones: consequently, the likelihood of receiving higher grant amounts by the FBO may be confounded by this underlying relationship.

In order to test this alternative scenario, and exclude that our results are driven by the grantee maturity, we replicate our main regression analysis (equation 1) across quartiles of *Age*. We show that the main coefficients of interest are positive and significant across all age quartiles, suggesting

that even the youngest, less established grantees benefit from social media activities when FBOs grants are at stake.

[INSERT TABLE 10 ABOUT HERE]

In Table 11, we test the robustness of our main results to an alternative measurement of Grant Amount. We use *Grant Amount Decile* as the dependent variable (column 1) and find results that are consistent. We also test the robustness of our results to alternative fixed effect specifications (i.e., *Region FE)* and clustering at the grantee level (columns 2-4). The results remain qualitatively similar.

[INSERT TABLE 11 ABOUT HERE]

5. Conclusion

Extant literature shows that digitalisation define innovative spaces for NPOs to affirm their transparency as well as new forms of accountability, finding great variability in the extent to which NPOs exploit internet opportunities (Dumont, 2013; Saxton & Guo, 2011). In particular, social media are seen as functional to develop new forms of communication and engagement with the public (Bellucci & Manetti, 2017; Xu & Saxton, 2019).

Previous studies focus on the role of the internet and social media in determining the fundraising success of non-profit organisations. Among others, Saxton & Wang (2014) describe peer-to-peer fund-raising network, while Gandia (2011) finds that the level of disclosure provided by NPOs through their websites is related to future donations.

However, the investigation of social media and their association with funding success is limited to settings where unsophisticated, non-institutional actors are involved. This study fills this gap and extends the current debate on the role of digitalisation in NPOs to a specific setting where donors are *institutional* actors whose grant allocation activity is subject to different dynamics. More

specifically, we examine whether social media *activity* and social media *engagement* are valued by institutional donors within a social capital perspective (Lin, 1999), and translate into tangible benefits in terms of access to better funding and less stringent oversight imposed by institutional donors (i.e., FBOs).

We exploit a unique sample of NPO grantees that have received at least one grant from a FBO in the context of Italy. We employ survey data on NPO grantees financed by Italian FBOs, and supplement them with data on social media activity and engagement that are hand collected from online and social media sources (i.e., Facebook and Twitter).

The study reveals that the real-time dialogic communication originated from NPOs on social media (i.e., social media *activity*) constitutes an incremental signal for donors with the potential of alleviating existing information asymmetries in the grantor-grantee relationship, and thus positively influences the FBO's decision on the final grant amount to be allocated to the NPO grantee. FBOs not only value social media activity but especially the NPOs ability to successfully engage their social media audience, that is social media *engagement*. Consistently, we find that NPOs who strategically invest in the use of social media to build, maintain, and foster a complex series of internal and external relationships with stakeholders through Facebook and Twitter engagement are rewarded with better financing.

Provided that FBOs' own success highly depends on the outcomes of their grantees' projects, foundations are highly incentivised to oversee their grantee's actions. To this end, they may require additional financial and non-financial disclosures from the grantees (Goncharenko, 2021). This study shows that the ability to create audience engagement and trust via social media might enhance NPO's legitimacy and increase its accountability to the general public, thus elevating its perception in the eyes of donors and reducing the oversight pressure from the latter.

Our paper contributes to the literature on digitalisation of NPOs and the strategic use of social media (Xu & Saxton, 2019; Anagnostopoulos et al. 2017; Chadwick, 2017; Bellucci & Manetti, 2017; Svensson et al., 2015; Guo & Saxton, 2014; Quinton & Fennemore, 2013; Lovejoy & Saxton, 2012;

Lovejoy et al., 2012; Waters & Jamal, 2011) and highlights the relevance of *social media activity* and *engagement* in improving the attractiveness of Italian NPOs, as well as their accountability in the eyes of institutional donors.

In doing so, we also contribute to the literature on the accountability of NPOs by providing evidence of a substitution effect between online social control and oversight required by the grantor. The paper highlights the multifaceted pressure that is faced by NPOs when interacting with institutional donors and provide evidence of the benefits of establishing a solid and long-lasting dialogue with online social media users. Notably, this acts as a mechanism to reduce the donor's accountability needs and may simultaneously lead to a more efficient use of financial resources, when the grantee is relieved from excessive pressure and scrutiny.

In terms of practical contribution, our study provides useful insights to foundation members, non-profit entities and practitioners who are interested in broadening their understanding of the use and effects of social media in the grantor-grantee relationship. The implications of this study are particularly relevant to executives and members of NPOs, who are in charge of assessing the trade-off between costs and benefits related with opening and maintaining a social media account and establishing a social media policy.

Finally, it is important to note that we study whether and how social media affect the grantor-grantee relationship in terms of funding success and oversight incentives exercised by the donor, while being silent on how social media could have transformed the overall communication strategy of NPOs. The evolution of social media has most likely changed how and when information (both financial and non-financial) is communicated for accountability purposes by NPOs. The interaction between social media and more traditional channels for accountability purposes presents an important and interesting area for future research.

References

Agyemang, G., O'Dwyer, B., Unerman, J., & Awumbila, M. (2017). Seeking "conversations for accountability". *Accounting, Auditing & Accountability Journal*, 30(5), 982-1007.

Alchian, A. A., & Demsetz, H. (1972). Production, information costs, and economic organization. *The American Economic Review*, 62(5), 777-795.

Anagnostopoulos, C., Gillooly, L., Cook, D., Parganas, P., & Chadwick, S. (2017). Stakeholder communication in 140 characters or less: A study of community sport foundations. *VOLUNTAS: International Journal of Voluntary and Non-profit Organisations*, *28*(5), 2224-2250.

Associazione Fondazioni e Casse di Risparmio (ACRI). (2019). Bank Foundations: XXIII Annual Report. ACRI, Rome. Available at: https://www.acri.it/wp-content/uploads/2020/09/Bozza_25Rapporto_11set.pdf

Awio, G., Northcott, D., & Lawrence, S. (2011). Social capital and accountability in grass-roots NGOs. *Accounting, Auditing & Accountability Journal*.

Barbetta, G. P. (1999). Foundations in Italy. In *Private funds, public purpose* (pp. 199-218). Springer, Boston, MA.

Bellucci, M., & Manetti, G. (2017). Facebook as a tool for supporting dialogic accounting? Evidence from large philanthropic foundations in the United States. Accounting, Auditing & Accountability Journal, 30(4), 874-905.

Bellucci, M., Simoni, L., Acuti, D. & Manetti, G. (2019). Stakeholder engagement and dialogic accounting: Empirical evidence in sustainability reporting. *Accounting, Auditing & Accountability Journal*, 32(5), 1467-1499.

Bebbington, J., Brown, J., Frame, B. & Thomson, I. (2007). Theorizing engagement: the potential of a critical dialogic approach, *Accounting Auditing and Accountability Journal*, 20(3), 356-381.

Bhati, A., & McDonnell, D. (2020). Success in an online giving day: The role of social media in fundraising. *Non-profit and Voluntary Sector Quarterly*, *49*(1), 74-92.

Boesso, G., & Cerbioni F., (2019). Governance and Strategic Philanthropy in Grant-Making Foundations: How to Improve the Effectiveness of Non-profit Boards, Palgrave Macmillan.

Boesso, G., Cerbioni, F., Menini, A., & Parbonetti, A. (2017). The role of the board in shaping foundations' strategy: an empirical study, *Journal of Management and Governance*, 21(2), 375–397.

Bonsón, E., & Ratkai, M., (2013). A set of metrics to assess stakeholder engagement and social legitimacy on a corporate Facebook page. *Online Information Review*, 37(5), 787–803.

Botosan, C. A. (1997). Disclosure level and the cost of equity capital. *The Accounting Review*, 72(3), 323-349.

Briones, R. L., Kuch, B., Liu, B. F., & Jin, Y. (2011). Keeping up with the digital age: How the American Red Cross uses social media to build relationships. *Public relations review*, *37*(1), 37-43.

Brown, J. (2009). Democracy, sustainability and dialogic accounting technologies: taking pluralism Seriously. *Critical Perspectives on Accounting*, 20(3), 313-342.

Brown, J. & Dillard, J. (2013). Critical accounting and communicative action: on the limits of consensual deliberation. *Critical Perspectives on Accounting*, 24(3), 176-190.

Buteau, E. (2015). *Assessing to achieve high performance: What non-profits are doing and how foundations can help*. Center for Effective Philanthropy (CEP).

Castillo, M., Petrie, R., & Wardell, C. (2014). Fundraising through online social networks: A field experiment on peer-to-peer solicitation. *Journal of Public Economics*, 114, 29-35.

Cazenave, B., & Morales, J. (2021). NGO responses to financial evaluation: auditability, purification and performance. *Accounting, Auditing & Accountability Journal*.

CEP (2017). *Relationships matter. Program Officers, Grantees and the Key to Success*, CEP, Cambridge, MA.

Chen, J., Dyball, M.C., & Harrison, G. (2020). Stakeholder salience and accountability mechanisms in not-for-profit service delivery organizations. *Financial Accountability & Management*, 36(1), 50-72.

Chenhall, R. H., Hall, M., & Smith, D. (2013). Performance measurement, modes of evaluation and the development of compromising accounts. *Accounting, Organisations and Society*, *38*(4), 268-287.

Chua, A.Y.K., Goh, D.H. & Ang, R.P. (2012). Web 2.0 applications in government websites: prevalence, use and correlations with perceived website quality. *Online Information Review*, 36(2), 175-195.

Connolly, C., Hyndman, N., & McConville, D. (2013). UK charity accounting: An exercise in widening stakeholder engagement. *The British Accounting Review*, *45*(1), 58-69.

Coyte, R., Rooney, J., & Phua, B. (2013). The impossibility of philanthropic funding decisions: The Australian non-government funder experience. *Financial Accountability & Management*, *29*(4), 397-418.

Cordery, C., Belal, A. R., & Thomson, I. (2019, January). NGO accounting and accountability: past, present and future. In *Accounting Forum* (Vol. 43, No. 1, pp. 1-15). Routledge.

Curtis, L., Edwards C., Fraser, K.L., Gudelsky, S., Holmquist, J., Thornton, K. & Sweetser, K.D. (2010). Adoption of social media for public relations by nonprofit organizations. *Public Relations Review,* 36, 90–92.

Deegan, C., & Islam, M. A. (2014). An exploration of NGO and media efforts to influence workplace practices and associated accountability within global supply chains. *The British Accounting Review*, 46(4), 397-415.

Dekker, H. C. (2004). Control of inter-organisational relationships: evidence on appropriation concerns and coordination requirements. *Accounting, organisations and society*, *29*(1), 27-49.

Delfin Jr, F. G., & Tang, S. Y. (2008). Foundation impact on environmental nongovernmental organisations: The grantees' perspective. *Non-profit and Voluntary Sector Quarterly*, *37*(4), 603-625.

Diamond, D. W., & Verrecchia, R. E. (1991). Disclosure, liquidity, and the cost of capital. *The Journal of Finance*, 46(4), 1325–1359.

Doerfel, M. L., Atouba, Y., & Harris, J. L. (2017). (Un)obtrusive control in emergent networks: Examining funding agencies' control over nonprofit networks. *Nonprofit and Voluntary Sector Quarterly*, 46, 469-487.

Dumont, G. E. (2013). Non-profit virtual accountability: An index and its application. *Non-profit and Voluntary Sector Quarterly*, *42*(5), 1049-1067.

Ebrahim, A. (2005). *NGOs and organisational change: Discourse, reporting, and learning*. Cambridge University Press.

Fuchs, C. (2008). Internet and Society: Social Theory in the Information Age, Routledge, New York, NY.

Gandia, J. L. (2011). Internet disclosure by non-profit organisations: Empirical evidence of nongovernmental organisations for development in Spain. *Non-profit and voluntary sector quarterly*, *40*(1), 57-78.

Goncharenko, G. (2021). The multiplicity of logics, trust, and interdependence in donor-imposed reporting practices in the non-profit sector. *Financial Accountability & Management*, 37 (1), 24–141.

Goncharenko, G. (2019). The accountability of advocacy NGOs: insights from the online community of practice. *Accounting Forum*, 43(1), 135-160.

Guo, C., & Saxton, G. D. (2014). Tweeting social change: How social media are changing non-profit advocacy. *Non-profit and voluntary sector quarterly*, *43*(1), 57-79.

Hall, M. (2014). Evaluation logics in the third sector. *VOLUNTAS: International Journal of Voluntary and Non-profit Organisations*, *25*(2), 307-336.

Hall, M., & O'Dwyer, B. (2017). Accounting, non-governmental organisations and civil society: The importance of non-profit organisations to understanding accounting, organisations and society. *Accounting, Organisations and Society*, *63*, 1-5.

Healy, P. M., & Palepu, K. G. (2001). Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature. *Journal of Accounting and Economics*, 31, 405-440.

Heideman, L. J. (2013). Pathologies in peacebuilding: Donors, NGOs, and community peacebuilding in Croatia. In *Research in Social Movements, Conflicts and Change*. Emerald Group Publishing Limited.

Herzog, P. S., & Yang, S. (2018). Social networks and charitable giving: Trusting, doing, asking, and alter primacy. *Nonprofit and Voluntary Sector Quarterly*, 47, 376-394.

Keating, E. K., & Frumkin, P. (2003). Reengineering non-profit financial accountability: Toward a more reliable foundation for regulation. *Public Administration Review*, *63*(1), 3-15.

Kuruppu, S.C. & Lodhia, S. (2019). Disruption and transformation: the organisational evolution of an NGO. *The British Accounting Review*, 51(6), 1-15.

Letts, C.W., Ryan, W., & Grossman A. (1997). Virtuous Capital: What Foundations Can Learn from Venture Capitalists, *Harvard business review,* 75(2), 36-44.

Lin, N., (1999). Building a network theory of social capital. *Connections*, 22, 28-51.

Lovejoy, K., & Saxton, G. D. (2012). Information, community, and action: How non-profit organisations use social media. *Journal of computer-mediated communication*, *17*(3), 337-353.

Lovejoy, K., Waters, R. D., & Saxton, G. D. (2012). Engaging stakeholders through Twitter: How non-profit organisations are getting more out of 140 characters or less. *Public relations review*, *38*(2), 313-318.

Manetti, G. (2011). The quality of stakeholder engagement in sustainability reporting: empirical evidence and critical points. *Corporate Social Responsibility and Environmental Management*, 18(2), 110-122.

Manetti, G. & Bellucci, M. (2016). The use of social media for engaging stakeholders in sustainability reporting. *Accounting, Auditing & Accountability Journal*, 29(6), 985-1011.

Meijer, A., & Thaens, M. (2010). Alignment 2.0: Strategic use of new internet technologies in government. *Government Information Quarterly*, 27(2), 113-121.

Mitchell, G. E. (2014). Strategic responses to resource dependence among transnational NGOs registered in the United States. *Voluntas: International Journal of Voluntary and Non-profit Organisations*, *25*(1), 67-91.

Nah, S., & Saxton, G. D. (2013). Modeling the adoption and use of social media by non-profit organisations. *New media & society*, *15*(2), 294-313.

Ostrander, S. A. (2007). The growth of donor control: Revisiting the social relations of philanthropy. *Nonprofit and Voluntary Sector Quarterly*, 36(2), 356-372.

O'Dwyer, B., & Unerman, J. (2007). From functional to social accountability: Transforming the accountability relationship between funders and non-governmental development organisations. *Accounting, Auditing & Accountability Journal*, *20*(3), 446-471.

O'Dwyer, B., & Unerman, J. (2008). The paradox of greater NGO accountability: A case study of Amnesty Ireland. *Accounting, Organisations and Society*, *33*(7-8), 801-824.

Quinton, S., & Fennemore, P. (2013). Missing a strategic marketing trick? The use of online social networks by UK charities. *International Journal of Non-profit and Voluntary Sector Marketing*, *18*(1), 36-51.

Saxton, G. D., & Guo, C. (2011). Accountability online: Understanding the web-based accountability practices of non-profit organisations. *Non-profit and voluntary sector quarterly*, *40*(2), 270-295.

Saxton, G. D., & Wang, L. (2014). The social network effect: The determinants of giving through social media. *Non-profit and voluntary sector quarterly*, *43*(5), 850-868.

Seo, H., Kim, J. Y., & Yang, S. U. (2009). Global activism and new media: A study of transnational NGOs' online public relations. *Public Relations Review*, *35*(2), 123-126.

Seo, H., & Vu, H. T. (2020). Transnational non-profits' social media use: A survey of communications professionals and an analysis of organisational characteristics. *Non-profit and Voluntary Sector Quarterly*, *49*(4), 849-870.

Sloan, M. F. (2009). The effects of non-profit accountability ratings on donor behavior. *Non-profit and voluntary sector quarterly*, *38*(2), 220-236.

Svensson, P. G., Mahoney, T. Q., & Hambrick, M. E. (2015). Twitter as a communication tool for non-profits: A study of sport-for-development organisations. *Non-profit and voluntary sector quarterly*, *44*(6), 1086-1106.

Uddin, M. M., & Belal, A. R. (2019, January). Donors' influence strategies and beneficiary accountability: An NGO case study. In *Accounting Forum* (Vol. 43, No. 1, pp. 113-134). Routledge.

Williamson, O. E. (1975). Markets and hierarchies: Analysis and antitrust implications. New York: Free Press.

Waters, R. D., Burnett, E., Lamm, A., & Lucas, J. (2009). Engaging stakeholders through social networking: How non-profit organisations are using Facebook. *Public relations review*, *35*(2), 102-106.

Waters, R. D., & Jamal, J. Y. (2011). Tweet, tweet, tweet: A content analysis of non-profit organisations' Twitter updates. *Public relations review*, *37*(3), 321-324.

Williamson, O. E. (1975). Markets and hierarchies: Analysis and antitrust implications. New York: Free Press.

Xu, W., & Saxton, G. D. (2019). Does stakeholder engagement pay off on social media? A social capital perspective. *Non-profit and Voluntary Sector Quarterly*, *48*(1), 28-49.

APPENDIX A. Variable Definitions

Dependent variables	Definition
Grant Amount	It is the natural logarithm of the grant amount as reported in the 2016 annual report of each FBOs
Grant Amount Decile	It is the decile rank of the grant amount.
Oversight	It is an index from 0 to 5. It is composed as the sum of 5 different index variables, each normalized between 0 and 1 and taking intermediate values (according to the grantee's answers) on a scale from 0 to 6.

Control variables	Definition
Posts per day	It is the average number of Facebook posts per day published by the NPO grantee during the year.
Likes per post	It is the average number of likes per Facebook post during the year.
Shares per post	It is the average number of shares per Facebook post during the year.
Comments per post	It is the average number of comments per Facebook post during the year.
Tweets per day	It is the average number of tweets per day posted by the NPO grantee during the year.
Retweets per tweet	It is the average number of retweets per tweet during the year.
Facebook age	It is the Facebook account age expressed in number of years as of 2016. It is calculated as the difference between 2016 and the year in which the Facebook account was created.
Twitter Age	It is the Twitter account age expressed in number of years as of 2016. It is calculated as the difference between 2016 and the year in which the Twitter account was created.
Website age	It is the website age expressed in number of years as of 2016. It is calculated as the difference between 2016 and the year in which the website was created.
Facebook	It is an indicator variable equal to one when the grantee has a Facebook profile, and zero otherwise.
Twitter	It is an indicator variable equal to one when the grantee has a Twitter profile, and zero otherwise.
Website	It is an indicator variable equal to one when the grantee has a Website page, and zero otherwise.
N Employees	It is past three-years average number of employees.
N Volunteers	It is past three-years average number of volunteers.
Revenue	It is past three-years average revenue.
Grant Frequency	It is the frequency of grants received from FBO over the previous three years expressed in percentages on a scale from 0 to 1.
Bank	It is the frequency of grants received from banks over the previous three years expressed as percentages on a scale from 0 to 1.
Exec involvement	It is an indicator variable equal to one when the executives are directly involved with the Foundation of Banking Origin, and zero otherwise.
Age	It is the NPO age, calculated as the difference between 2016 and the year in which the NPO was founded.
Public Financing	It is a continuous variable indicating the percentage of public source of financing on the total amount.
Private Donations	It is a continuous variable indicating the percentage of private donations as a source of financing on the total amount.
Membership Fees	It is a continuous variable indicating the percentage of membership fees as a source of financing on the total amount.
Sponsorship	It is a continuous variable indicating the percentage of sponsorship as a source of financing on the total amount.

Table 1. Sample composition

This table reports the sample composition by type and sector of operation of grantees.

Panel A. Sample composition by type of grantee

	N	%
Social Promotion Associations	49	22.37%
Voluntary Organisations	34	15.53%
Associations	56	25.57%
Social cooperatives	42	19.18%
Operative foundations	38	17.35%
Total	**219**	

Panel B. Sample composition by sector of operation of grantee

Arts & Culture	84	38.36%
Education & Training	31	14.16%
Local development	5	2.28%
Environmental protection	1	0.46%
Health care	45	20.55%
Volunteering	22	10.05%
Research & development	3	1.37%
Other	27	12.33%
Total	**219**	

Table 2. Descriptive statistics

This table reports descriptive statistics of all variables used in the analyses. All variables are defined in Appendix A.

Variable	N	Mean	SD	p25	Median	p75
Grant Amount	219	9.84	1.34	8.92	9.85	10.60
Oversight	219	2.36	1.45	1.33	2.50	3.33
Posts per day	219	0.33	0.45	0.00	0.17	0.47
Likes per post	219	20.41	122.00	0.00	3.92	9.42
Shares per post	219	6.01	33.69	0.00	1.19	2.62
Comments per post	219	0.51	2.06	0.00	0.17	0.42
Tweets per day	68	0.56	1.11	0	0.19	0.48
Retweets per tweet	68	0.93	2.32	0	0.26	0.99
Facebook Age	219	2.82	2.22	1.00	3.00	5.00
Website Age	219	6.76	5.53	2.00	5.00	12.00
Twitter Age	219	0.80	1.71	0.00	0.00	0.00
Facebook	219	0.84	0.37	1.00	1.00	1.00
Website	219	0.84	0.37	1.00	1.00	1.00
Twitter	219	0.33	0.47	0.00	0.00	1.00
N Employees	219	0.17	0.30	0.00	0.00	0.25
N Volunteers	219	0.30	0.33	0.00	0.25	0.50
Revenue	219	0.51	0.40	0.00	0.67	1.00
Bank	219	0.18	0.23	0.00	0.00	0.33
Grant Frequency	219	0.50	0.20	0.33	0.50	0.67
Exec involvement	219	0.23	0.42	0.00	0.00	0.00
Age	219	19.24	16.63	7.00	15.00	27.00
Private Donations	219	28.98	31.72	2.00	15.00	50.00
Public Financing	219	31.74	30.48	2.00	20.00	52.00
Membership Fees	219	7.21	13.94	0.00	1.00	10.00
Sponsorship	219	7.77	16.52	0.00	0.00	6.00

Table 3. Correlation Matrix

This table presents the Pearson's correlation matrix. * indicates significance at the 5% level. All variables are defined in Appendix A.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
(1) Grant Amount	1.00													
(2) Monitor	0.12*	1.00												
(3) Posts per day	0.25*	0.07	1.00											
(4) Likes per post	0.12*	0.04	0.36*	1.00										
(5) Shares per post	0.12*	0.56*	0.38*	0.99*	1.00									
(6) Comments per post	0.11*	0.03	0.39*	0.99*	0.98*	1.00								
(7) Tweets per day	0.23*	0.11	0.38*	0.72*	0.71*	0.71*	1.00							
(8) Retweet per tweet	0.18	0.05	0.35	0.87*	0.89*	0.86*	0.73*	1.00						
(9) Facebook Age	0.20*	0.00	0.37*	0.22*	0.22*	0.23*	0.28*	0.20*	1.00					
(10) Website Age	0.23*	-0.07	0.23*	0.12*	0.12*	0.13*	0.19	0.12*	0.30*	1.00				
(11) Twitter Age	0.09	0.05	0.43*	0.34*	0.36*	0.35*	0.50*	0.49*	0.28*	0.06	1.00			
(12) Facebook	0.03	-0.02	0.23*	0.07	0.07	0.08	-0.12	0.09	0.56*	0.12*	0.17*	1.00		
(13) Website	0.11*	-0.09	0.16*	0.06	0.06	0.07	0.10	0.09	0.27*	0.53*	0.15*	0.22*	1.00	
(14) Twitter	0.11*	0.05*	0.45*	0.15*	0.15*	0.14*	0.05	0.23*	0.31*	0.23*	0.47*	0.22*	0.22*	1.00

Table 4. Social media activity and grant amount - H1

This table reports the results of OLS regressions to test H1. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively, using a two-tailed test. Standard errors are clustered at FBO level. All variables are defined in Appendix A.

Dependent variable	(1) Grant Amount	(2) Grant Amount
Posts per day	**0.563*****	
	(0.151)	
Tweets per day		**0.557****
		(0.229)
Facebook Age	0.141	0.255***
	(0.083)	(0.063)
Website Age	0.018*	-0.033
	(0.010)	(0.036)
Twitter Age	-0.001	-0.101
	(0.055)	(0.171)
Facebook	-0.337	1.439***
	(0.367)	(0.395)
Website	-0.293	0.620***
	(0.207)	(0.183)
Twitter	-0.126	-0.547
	(0.182)	(0.498)
N Employees	-0.463	-1.663*
	(0.489)	(0.900)
N Volunteers	-0.334	-1.554***
	(0.241)	(0.390)
Revenue	1.166***	3.416***
	(0.278)	(0.715)
Bank	-0.431**	1.389***
	(0.203)	(0.379)
Grant Frequency	0.318	-2.602
	(0.329)	(1.622)
Exec Involvement	0.522*	0.525
	(0.287)	(0.970)
Age	-0.002	0.009
	(0.005)	(0.007)
Constant	9.499***	5.988***
	(0.210)	(0.743)
FBO FE	YES	YES
Organisation Type FE	YES	YES
R-squared	0.558	0.699
Observations	219	68

Table 5. Social media engagement and grant amount – H2

This table reports the results of OLS regressions to test H2. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively, using a two-tailed test. Standard errors are clustered at FBO level. All variables are defined in Appendix A.

Dependent variable	(1) Grant Amount	(2) Grant Amount	(3) Grant Amount	(4) Grant Amount
Likes per post	**0.001***			
	(0.000)			
Shares per post		**0.002****		
		(0.001)		
Comments per post			**0.030****	
			(0.011)	
Retweet per tweet				**0.155****
				(0.055)
Facebook Age	0.158*	0.158*	0.159*	0.308***
	(0.089)	(0.088)	(0.090)	(0.052)
Website Age	0.022*	0.022*	0.022*	-0.017
	(0.010)	(0.011)	(0.011)	(0.040)
Twitter Age	0.008	0.008	0.010	-0.010
	(0.065)	(0.067)	(0.065)	(0.136)
Facebook	-0.348	-0.348	-0.354	0.004
	(0.403)	(0.400)	(0.405)	(0.269)
Website	-0.285	-0.285	-0.288	0.537***
	(0.219)	(0.220)	(0.218)	(0.139)
Twitter	0.013	0.013	0.012	-0.345
	(0.226)	(0.227)	(0.225)	(0.442)
N Employees	-0.580	-0.572	-0.563	-1.254
	(0.566)	(0.579)	(0.559)	(0.987)
N Volunteers	-0.261	-0.259	-0.255	-1.529***
	(0.239)	(0.231)	(0.237)	(0.289)
Revenue	1.320***	1.315***	1.314***	2.957***
	(0.364)	(0.366)	(0.361)	(0.717)
Bank	-0.503**	-0.503**	-0.516**	1.097***
	(0.192)	(0.191)	(0.195)	(0.178)
Grant Frequency	0.264	0.268	0.273	-1.864
	(0.323)	(0.325)	(0.320)	(1.510)
Exec Involvement	0.478*	0.480*	0.477*	0.355
	(0.249)	(0.250)	(0.249)	(0.868)
Age	-0.002	-0.002	-0.002	0.008
	(0.005)	(0.005)	(0.005)	(0.007)
Constant	9.434***	9.432***	9.427***	6.664***
	(0.211)	(0.204)	(0.209)	(2.166)
FBO FE	YES	YES	YES	YES
Organisation Type FE	YES	YES	YES	YES
R-squared	0.539	0.539	0.538	0.684
Observations	219	219	219	68

Table 6. Social media activity, engagement and donor oversight – H3 (Facebook)

This table reports the results of OLS regressions to test H3. ***, **, and * indicate significance at the 1%, 5%, and 1(levels, respectively, using a two-tailed test. Standard errors are clustered at FBO level. All variables are defined in Appendix A.

Dependent variable	(1) Oversight	(2) Oversight	(3) Oversight	(4) Oversight
Posts per day	**-0.010**			
	(0.183)			
Likes per post		**-0.001****		
		(0.000)		
Shares per post			**-0.003***	
			(0.001)	
Comments per post				**-0.055***
				(0.027)
Facebook Age	0.061	0.068	0.068	0.069
	(0.051)	(0.052)	(0.052)	(0.052)
Website Age	-0.009	-0.007	-0.007	-0.006
	(0.020)	(0.021)	(0.021)	(0.022)
Twitter Age	-0.025	-0.008	-0.009	-0.004
	(0.038)	(0.042)	(0.042)	(0.043)
Facebook	-0.071	-0.099	-0.098	-0.099
	(0.313)	(0.311)	(0.311)	(0.311)
Website	**-0.802***	**-0.825***	**-0.825***	**-0.830***
	(0.409)	(0.416)	(0.415)	(0.414)
Twitter	0.064	0.050	0.049	0.046
	(0.258)	(0.281)	(0.280)	(0.279)
N Employees	0.044	0.833*	0.818*	0.852*
	(0.109)	(0.430)	(0.425)	(0.428)
N Volunteers	0.705*	-0.119	-0.123	-0.099
	(0.381)	(0.272)	(0.276)	(0.273)
Revenue	-0.191	0.007	0.014	0.001
	(0.262)	(0.318)	(0.318)	(0.313)
Bank	0.052	-0.486	-0.485	-0.489
	(0.325)	(0.448)	(0.448)	(0.444)
Grant Frequency	-0.423	0.193	0.188	0.188
	(0.410)	(0.512)	(0.513)	(0.512)
Grant Amount	0.167	0.048	0.047	0.048
	(0.515)	(0.110)	(0.110)	(0.111)
Exec Involvement	-0.429**	-0.434**	-0.436**	-0.433**
	(0.204)	(0.189)	(0.189)	(0.190)
Age	0.001	0.000	0.000	-0.000
	(0.004)	(0.004)	(0.004)	(0.004)
Constant	1.588	1.476	1.488	1.457
	(1.009)	(1.055)	(1.054)	(1.060)
FBO FE	YES	YES	YES	YES
Organisation Type FE	YES	YES	YES	YES
R-squared	0.247	0.250	0.250	0.251
Observations	219	219	219	219

Table 7. Social media activity, engagement and donor oversight – H3 (Twitter)

This table reports the results of OLS regressions to test H3. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively, using a two-tailed test. Standard errors are clustered at FBO level. All variables are defined in Appendix A.

Dependent variable	(1) Oversight	(2) Oversight
Tweets per day	**0.227**	
	(0.470)	
Retweet per tweet		**0.096**
		(0.152)
Facebook Age	0.078	0.096
	(0.153)	(0.152)
Website Age	-0.055	-0.053
	(0.048)	(0.054)
Twitter Age	-0.092	-0.067
	(0.183)	(0.121)
Facebook	-1.137	-1.731**
	(1.235)	(0.682)
Website	-1.598*	-1.626*
	(0.882)	(0.962)
Twitter	-0.234	-0.198
	(0.572)	(0.671)
N Employees	1.317	1.376
	(1.369)	(1.328)
N Volunteers	-1.680***	-1.767*
	(0.268)	(0.974)
Revenue	0.749	0.613
	(2.055)	(1.272)
Bank	0.418	0.460
	(0.475)	(0.905)
Grant Frequency	-0.961	-0.768
	(2.570)	(1.484)
Grant Amount	-0.166	-0.165
	(0.363)	(0.221)
Exec Involvement	-0.275	-0.339
	(0.591)	(0.672)
Age	0.011	0.011
	(0.007)	(0.010)
Constant	6.764***	6.080**
	(2.295)	(3.019)
FBO FE	YES	YES
Organisation Type FE	YES	YES
R-squared	0.414	0.419
Observations	68	68

Table 8. Determinants of social media activity and engagement (Facebook)

This table reports the results of OLS regressions of the determinants of *Posts per day* (Column 1), *Likes per post* (Column 2), *Shares per post* (Column 3), *Comments per post* (Column 4). ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively, using a two-tailed test. Standard errors are clustered at FBO level. All variables are defined in Appendix A.

Dependent variable	*(1)* *Posts per day*	*(2)* *Likes per post*	*(3)* *Shares per post*	*(4)* *Comments per post*
Private Donations	**0.002***	**0.007***	**0.006****	**0.017****
	(0.001)	**(0.003)**	**(0.002)**	**(0.006)**
Membership Fees	0.002	0.002	0.002	0.000
	(0.004)	(0.008)	(0.005)	(0.006)
Sponsorship	0.003	0.002	0.003	0.010
	(0.002)	(0.006)	(0.005)	(0.010)
Public Financing	0.000	0.002	0.002	0.000
	(0.002)	(0.004)	(0.003)	(0.005)
Facebook Age	0.038***	0.141***	0.116***	0.146*
	(0.009)	(0.036)	(0.025)	(0.085)
Website Age	0.011***	0.014	0.018**	0.084*
	(0.003)	(0.012)	(0.008)	(0.043)
Twitter Age	0.040**	0.112*	0.094*	0.397*
	(0.014)	(0.061)	(0.053)	(0.207)
Facebook	-0.035	0.299	-0.026	-0.479
	(0.078)	(0.252)	(0.157)	(0.390)
Website	-0.010	0.189	0.031	-0.417
	(0.044)	(0.185)	(0.110)	(0.338)
Twitter	0.210***	0.091	0.076	-0.459**
	(0.065)	(0.162)	(0.172)	(0.210)
Controls	Yes	Yes	Yes	Yes
Organisation Type FE	Yes	Yes	Yes	Yes
FBO FE	Yes	Yes	Yes	Yes
R-squared	0.415	0.445	0.471	0.370
Observations	219	219	219	219

Table 9. Determinants of social media activity and engagement (Twitter)

This table reports the results of OLS regressions of the determinants of *Tweets per day* (Column 1), and *Retweets per tweet* (Column 2). ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively, using a two-tailed test. Standard errors are clustered at FBO level. All variables are defined in Appendix A.

Dependent variable	*(1)* Tweets per day	*(2)* Retweets per tweet
Private Donations	**0.024*****	**0.041*****
	(0.006)	**(0.008)**
Membership Fees	**0.026****	**0.040***
	(0.010)	**(0.020)**
Sponsorship	0.005	0.009
	(0.011)	(0.009)
Public Financing	0.010	0.005
	(0.010)	(0.012)
Facebook Age	0.117	0.064
	(0.073)	(0.069)
Website Age	0.042**	0.100**
	(0.017)	(0.044)
Twitter Age	-2.810***	-0.300
	(0.426)	(0.376)
Facebook	0.468*	0.993*
	(0.251)	(0.553)
Website	-0.075	-0.342
	(0.296)	(0.603)
Twitter	1.469***	2.690
	(0.490)	(2.160)
Controls	Yes	Yes
Organisation Type FE	Yes	Yes
FBO FE	Yes	Yes
R-squared	0.650	0.508
Observations	68	68

Table 10. Sample split on *Age* quartiles

This table reports the results of OLS regressions of equation (1) on subsamples of different *Age* quartiles. In Column (1), the sample is restricted to organisations in the *Age* quartile, in Column (2) the sample is restricted to organisations in the second *Age* quartile, in Column (3) the sample is restricted to organisations in the third *Age* quartile, and in Column (4) the sample is restricted to the fourth *Age* quartile. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively, using a two-tailed test. Standard errors are clustered at FBO level. All variables are defined in Appendix A.

Dependent variable	*(1)* Grant Amount	*(2)* Grant Amount	*(3)* Grant Amount	*(4)* Grant Amount
	Age<p25	*Age>=p25* *Age<p50*	*Age<=p50* *Age<p75*	*Age>=p75*
Posts per day	**0.302*****	**0.489***	**0.820****	**1.211****
	(0.084)	**(0.244)**	**(0.345)**	**(0.459)**
Facebook Age	0.294***	0.088	0.091	0.210
	(0.047)	(0.098)	(0.092)	(0.122)
Website Age	0.075***	-0.047	0.036	0.026
	(0.005)	(0.087)	(0.058)	(0.065)
Controls	Yes	Yes	Yes	Yes
Organisation Type FE	Yes	Yes	Yes	Yes
FBO FE	Yes	Yes	Yes	Yes
R-squared	0.910	0.657	0.733	0.749
Observations	45	60	59	55

Table 11. Alternative Grant Amount measurement, FE, and Clustering

This table reports results of OLS regressions of robustness tests. The dependent variables are *Grant Amount Decile* (Columns 1-2), and *Grant Amount* (Column 3). We also test the robustness of results to the inclusions of Region FE and alternative clustering. Standard errors are clustered at FBO level (Column 1) and at grantee level (Columns 2-3). ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively, using a two-tailed test. All variables are defined in Appendix A.

Dependent variable	(1) Grant Amount Decile	(2) Grant Amount Decile	(3) Grant Amount
Posts per day	**1.054***	**1.207***	**0.648***
	(0.255)	**(0.376)**	**(0.200)**
Facebook Age	0.222	0.143	0.100*
	(0.149)	(0.110)	(0.052)
Website Age	0.061**	0.055	0.015
	(0.025)	(0.044)	(0.022)
Controls	Yes	Yes	Yes
Organisation Type FE	Yes	Yes	Yes
FBO FE	Yes	No	No
Region FE	No	Yes	Yes
R-squared	0.555	0.459	0.464
Observations	219	219	219