The Contribution of Crowdfunding for Philanthropy:

A systematic review and framework of donation and reward crowdfunding

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1. **Abstract**

 Which novelties do donation- and reward-based crowdfunding bring to philanthropy? Scholars interested in crowdfunding contributed to developing empirical explanations on which features impact online giving. However, the focus on theory building is limited. We developed a theoretical framework by categorising the empirical findings reported in 198 studies, which resulted in four crowdfunding features impacting giving: (1) project creator, (2) social information, (3) rewards, and (4) project description. We explain why these features impact giving by integrating them with insights from several fields of social sciences, deriving ten giving mechanisms. We conclude that with impacting donations via crowdfunding, three giving themes exist: being affected by (1) the perceived project's quality, (2) social connections and/or (3) tangible rewards. The categorisation of mechanisms for giving allows initiators to extract best practice examples for increasing the probability of successful crowdfunding projects considering the giving mechanisms.

1. **Introduction**

Online fundraising methods like donation- and reward-based crowdfunding are becoming more critical since traditional methods like door-to-door collections are less effective in soliciting donations (e.g. see the Netherlands, Van Teunenbroek & Bekkers, 2020b; Van Teunenbroek, De Wit, et al., 2022; Van Teunenbroek & Hasanefendic, 2022). Crowdfunding projects involve four actors: the funding goal ("crowdfunding project"), the person or group that is proposing a project and seeking funding ("initiator"), the Internet users who support the project by pledging an amount of their choosing ("donor") and the Internet platform ("crowdfunding platform"). The platform hosts crowdfunding projects, therefore, playing a mediating role between initiators and donors. Platforms promote projects via customized pages hosted by the initiator. Before the project is launched, the initiator has to determine a target amount: the minimum required for the project to be successful. This connects to the timeframe: projects have a predefined number of days to collect the money. Both are communicated with potential donors via the webpage of the project.

Crowdfunding is used to collect funds for individuals (private individuals or professionals like artists, see Dalla Chiesa, 2022), charities (Van Teunenbroek & Hasanefendic, 2022) and institutions (like cultural institutions, see Dalla Chiesa, 2022; Dalla Chiesa et al., 2021; Dalla Chiesa et al., 2022; Van Teunenbroek & Smits, 2022). For instance, collecting funds to cover medical costs[[1]](#footnote-1), support medical research[[2]](#footnote-2), work on a new art show[[3]](#footnote-3), support Ukrainian war victims[[4]](#footnote-4) and earthquake victims in Turkey[[5]](#footnote-5). Currently, many crowdfunding projects lack enough funding to succeed (Jiang et al., 2021; Wei Shi, 2018). For instance, only one out of ten viewers of a crowdfunding page donate (Van Teunenbroek & Bekkers, 2020a). Thus, discussing how crowdfunding can contribute to understanding philanthropic behaviour online is of great importance.

Since 2011, numerous studies have examined stimulants for donating via crowdfunding, although attention is scarcer than the scholarly debate on equity- and lending-based crowdfunding (Alegre et al., 2021). While systematic reviews of donation- and reward-based crowdfunding exist (Salido-Andres et al., 2021), our aim is not to merely summarise studies but to provide a theoretical framework focused on the mechanisms that are common to crowdfunding. We observed that studies contributed limitedly to no effort to developing consistent theoretical explanations. As a result, we are left with a series of empirical accounts without a clear theoretical background, especially when reward and donation models are considered. The model choice is not determinant for giving behaviour since both allow non-commercial support (Bürger & Kleinert, 2021). Typically, donation-based platforms (e.g., Go Fund Me) thrive on giving behaviour as a rule, while reward-based platforms (e.g., Kickstarter) allow donations in the “reward” tiers. For most of reward-based crowdfunding, donating is a matter of choosing a reward level without a physical or digital product in return.

Given our comprehensive focus on the two models, we consider a review focused on developing a theoretical framework an essential next step to assist practitioners and academics in exploring crowdfunding. Our research question is: “Which features of crowdfunding projects mediate and impact online donations? We developed such a theoretical framework by first categorising the empirical findings reported in 198 studies, which resulted in four key characteristics of crowdfunding, namely (presented in no particular order) the (1) project creator, (2) social information, (3) rewards, and (4) project description. As a next step, we explain why these features impact giving (i.e. mediators) by integrating them with insights from several fields of social sciences, like behavioural economics, social psychology, consumer behaviour and philanthropy.

Our model is consistent with the finding that donors have different reasons for giving (Bekkers et al., 2011) and that crowdfunding offers a specific way to engage with fundraising campaigns. With crowdfunding, donors can easily identify the project creator, which is often a person, a group of people, or an institution (Van Teunenbroek & Hasanefendic, 2022). Via this, donors are affected by the relationship with the project creator (Tosatto et al., 2022) or the creator's credibility (Y. Li et al., 2020). Second, via a crowdfunding page, a donor can see the behaviour of other donors (i.e. social information, see Van Teunenbroek, 2020), which can be interpreted as a quality signal (Van Teunenbroek, Bekkers, et al., 2020). A donor might think: if others are donating to this project, they must consider it a qualitatively good enough project. Third, rewards are a key component of crowdfunding as it stimulates those expecting any in-kind (Ryu, Kim, et al., 2016) or intangible rewards (Bitterl et al., 2018). Fourth, the transparency of crowdfunding is reflected in the detailed project description, whereby the project's goal, cause of the problem and suggested solutions are conveyed. Donors are, thus, affected by the project's quality (W. Wu et al., 2022), emotional reaction (Nakagawa et al., 2022), and connected community (Zheng et al., 2018). We conclude that three general themes are specific to giving via crowdfunding: being affected by (1) a project's quality, (2) social connections or (3) tangible rewards.

The categorisation of mechanisms for giving via crowdfunding adds to an emerging area of research. It allows initiators to extract best-practices for increasing the probability of successful projects.

1. Application or exclusion criteria
2. Selection approach round I
3. Eligibility criteria and search terms
4. Manually selected or deselected the found articles further

(*n* = 194)

1. Limited our search to articles published before March 2022.
2. Limited our search to articles written in English, Dutch or German.
3. Searched databases (Google Scholar and ResearchGate).

* 1. Donation context I: with at least one of these words ‘reward-based crowdfunding’, ‘donation-based crowdfunding’ or ‘philanthropic crowdfunding’; in the title, keywords and/or abstract (*n* = 6,360).
	2. Donation context II: without the words “equity-based” and/or “lending-based” (*n* = 2,960).
	3. Increasing the focus on stimulating giving I: Excluding papers that used the following keywords: finance, legal (*n* = 501).
	4. Increasing the focus on stimulating giving II: Included papers that used the following keywords: donating, donation, giving (*n* = 254).

1. Specified the independent variable: the article needed to focus on impacting crowdfunding behaviour, explaining giving via crowdfunding or researching motives for giving.
2. Excluding papers that only describe the concept of crowdfunding, like discussing the different crowdfunding models.
3. Excluding papers that focus on the non-giving side of crowdfunding: articles focussed crowdfunding platforms, initiators or end-beneficiaries.
4. Excluding papers focussed on developing an algorithm able to predict crowdfunding success.
5. Excluding papers focussing solely on ventures if the backers were organisations rather than individuals.
6. Selection approach round II (*n* = 219)
7. Snowball process of retracing in-article references.
8. Personal and email contact with several authors of the found papers.

Figure 1. Overview of the selection process.

**Review approach**

Figure 1. Overview of the selection process.

1. Research context & sample country

(n = 219)

1. Research concept and outcome

(n = 219)

1. Crowdfunding features (n = 169)

4. Supporting mechanisms (n = 198)

1. Research strategy: describes how the data was collected (e.g. survey, interview, case study, experiment).
2. Country setting: describes the country in which the data was collected. If no specific country was selected and it was a worldwide platform, it was coded as “worldwide”.
3. Main concept: describes the article's main focus (e.g. motivation, project description, image).
4. Outcome: describes the measured outcome. Options were: donation amount, number of donors, total amount and success rate.

Categorizing the concepts to structure the concepts resulted in four crowdfunding features impacting giving:

1. Project creator
2. Social information
3. Project description
4. Rewards

Identified mechanisms that can explain why those four features impact giving via crowdfunding:

1. We reviewed the papers regarding the theory they used to support their design.
2. We reviewed the papers regarding the theory they used to explain their (lacking) findings.
3. If needed, we used the theoretical framework of Bekkers and Wiepking (2011) to support a mechanism.
4. If needed, we used theories of social psychology, behavioural economics and consumer behaviour.

**Developing the theoretical framework**

5. Main themes

The ten mechanisms resulted in three overall themes which can explain why people give via crowdfunding:

1. Quality signals
2. Social aspects
3. Tangible rewards

Figure 2. Overview of the steps taken to develop the theoretical framework

1. **Methodology**

The core of our review is 198 empirical studies reporting on stimulants for crowdfunding from several fields (e.g., philanthropy, behavioural economics, consumer behaviour, and social psychology). The high amount of

papers prevent us from citing and discussing each paper. Therefore, following the example of Chapman et al. (2022), we discuss categories of articles, using selected articles to describe the proposed framework. Further details of the corpus of literature and topics covered are published as supplementary materials via the Open Science Framework (https://osf.io/ahdrc/).

Following the methodological approach of Van Teunenbroek, Bekkers, et al. (2020), the process consists of two steps: we (a) systematically reviewed the literature (see Figure 1) and (b) developed a theoretical framework (see Figure 2).

To review the literature, we used several inclusion criteria (see Figure 1). We focus on donation- and reward-based crowdfunding, excluding papers on equity- and lending-based crowdfunding, as they focus on investment behaviour instead (Pierrakis, 2019). We focus on papers reporting on giving behaviour but exclude papers on developing algorithms and initiators' motives since those do not add to our understanding of mechanisms impacting giving behaviour.

Academics published the included studies in journals, books, or working papers before June 2022. We searched (a) academic databases (PsychInfo, PubMed); (b) Google Scholar; (c) ResearchGate and (d) references cited in the articles found. We used the following keywords: reward-based crowdfunding, donation-based crowdfunding, philanthropic crowdfunding, stimulants, stimulating, increasing success and motivation. We searched for studies with these keywords in their title, keywords, or abstracts. This process resulted in 194 papers. Finally, we used a snowball process of retracing in-article references, which resulted in 219 articles .

We coded the (a) studied variables, (b) type of crowdfunding, (c) research context and (d) country (see Figure 2). An overview of the categorisation per paper is included as supplementary material . The suggested feature refers to the independent variable used in the paper. The type of crowdfunding can consist of donation-based and/or reward-based crowdfunding. The research context indicates whether it was a lab experiment, a field experiment, an interview, a case study or a survey. Country refers to the country where the data was collected. As many projects are available worldwide, and if the paper did not specifically mention a specific country focus, we categorised it as 'worldwide'.

Next, we developed a theoretical framework by reviewing each study and specifying the paper's focus (i.e., independent variable, central concept). This resulted in four main crowdfunding features, supported by 169 articles, which are said to impact giving; see step 3 in figure 2. Table 1 in the supplementary information overviews the supporting papers per feature. Next, we focussed on explaining why (i.e. mediators) these features impact giving via crowdfunding, supported by 198 articles, by using (1) explanations mentioned in the cited papers, (2) the theoretical framework proposed by Bekkers and Wiepking (2011), (3) insights from social psychology (e.g. need to belong, social ties), (4) behavioural economics (e.g. quality signals, utility) and (5) consumer behaviour (e.g. consuming rewards). This resulted in ten mechanisms (see Figure 3).

1. **General mechanisms impacting giving behaviour**

In terms of philanthropy, we follow the definition of Schuyt (2021), who states that: “Philanthropy is a universal social arrangement that provides the framework for philanthropic behaviour, giving (money, goods and time) to others (outside the own household), to the group or community by individuals and organisations, to primarily serve the interest of those other(s) (or group/community).” His definition is a renewed and more modern version of the definition of Payton (1988). The definition of Schuyt (2021) considers giving as philanthropic as long as it is outside of one’s household. For our purposes, thus, giving behaviour is a decision taken at the individual level, in which the chosen crowdfunding model plays a minor role as long as online platforms allow supporters to give money without expected returns.

Several mechanisms impacting giving behaviour in traditional giving contexts (see Bekkers & Wiepking, 2011) are also expected to influence giving via crowdfunding. For example, altruism may explain why socially oriented-projects succeed more than more business-like projects (Calic et al., 2016). Solicitation is expected to impact giving since most donors giving via crowdfunding are still approached to give (Van Teunenbroek & Hasanefendic, 2022). Moreover, donors often mention psychological benefits like joy of giving (Cecere et al., 2017; Efrat et al., 2020; Yi et al., 2022): the positive mood change because of donating (Andreoni, 1989). In our framework, we do not deny their influence but rather focus on key features of crowdfunding and how they impact giving. Therefore, we add to the literature by introducing a more modern way of online giving and its related mechanisms.

1. **Crowdfunding features and mechanisms impacting giving behaviour**

We present the literature via four key crowdfunding features identified by the literature to impact crowdfunding donations (see Figure 3). We discuss multiple mechanisms that might explain why donors are affected by these four features. While multiple mechanisms exist, we focus on those who received the most support from the crowdfunding literature. The mechanisms do not exclude each other: they may operate concomitantly.



Figure 3. Overview of the crowdfunding features and discussed mechanisms impacting giving via crowdfunding. The colours reflect the three overarching themes we identified: quality signals (blue), social aspects (green) and tangible rewards (orange).

*5.1 Project creator*

With crowdfunding, the project creator, the individual or the group seeking funding, is clearly stated and easily identified. Here we focus on any information related to the project creator (written or visual), thereby excluding information on the project (which we consider as “project description”). Research suggests that the relationship between project creators and donors is essential when studying crowdfunding (see Table 1 in the supplementary information), as participants are likelier to donate to a project with a stated initiator than those assigned to a project without the initiator’s name (Nekmat et al., 2019). We propose that the project's creator influences donors because of (1) the strength of the ties with the creator and (2) the creator's reputation.

*5.1.1 Tie strength with the project creator*

Crowdfunding is mostly characterised by network-based fundraising (Van Teunenbroek & Hasanefendic, 2022; Van Teunenbroek & Smits, 2022), as initiators are often close to donors (Borst et al., 2018; Dalla Chiesa, 2022). Therefore, we argue that people are likelier to donate to a crowdfunding project with a strong tie than a weak one (Tosatto et al., 2022) – the latter representing only casual contacts (Haythornthwaite, 2005). This suggests that direct contact between the initiator and donor is important (Ahrens et al., 2019).

In interviewing donors, participants used words such as "near" versus "far" to describe the relationship with the initiator, giving more often to the first category (Huang et al., 2021). Donors often expressed that personally knowing the initiator was enough for them to donate. When this is not present, donors focus on the project's content (Demandt, 2019). Survey research suggests that donation-based donors with weak ties need more information about the project than strong ties (Polzin et al., 2018).

The focus on network-based fundraising means that project makers need a large network to collect larger amounts successfully (Aprilia et al., 2017; Byrnes et al., 2014; Kromidha et al., 2016; Kunz et al., 2016; Liao et al., 2015; Sokolova et al., 2018; X. Zhang et al., 2022). Founders may strategically withhold the campaign launch until the most beneficial moment to collect monetary gifts based on strong ties. In a qualitative study, Dalla Chiesa and Dekker (2021) show how founders of artistic projects substantially rely on earlier kindness, prior debts and the expectations of gift-giving on celebratory dates to channel donations.

The network impact is more present at the beginning and end of a campaign (Borst et al., 2018) since early contributions of "family and friends" are later replaced by loyal backers who care more about the content of the project than the creator (Skirnevskiy et al., 2017). This connects to the finding that social media is most effective at a campaign's beginning (Dehdashti et al., 2022), since with soliciting close ties, social media platforms play an essential role, with Facebook being the leading media platform from the start (Hekman et al., 2013; Hong et al., 2015), and to this day (Van Teunenbroek & Hasanefendic, 2022). Researchers explain that Twitter focuses on objective information and quality signals, while Facebook focuses on supporting connections and social norms. Moreover, to strengthen the connection, direct communication between the donor and project creator is important (Cicchiello et al., 2022) and often happens within the platform via comments and updates.

*5.1.2 Perceived credibility of the project creator*

Crowdfunding provides information that impacts the perceived credibility of a creator (Y. Li et al., 2020). We perceive credibility as a perceptual concept rather than an objective one (Flanigan, 2017). In that sense, credibility relates to trustworthiness, thereby impacting how much people find the information[[6]](#footnote-6) trustable or believable (E. Kim et al., 2022). Crowdfunding is typically characterised by high uncertainty and ambiguity, wherein information asymmetry exists between initiators and donors (Josefy et al., 2017). In such a case, people focus on quality signals to guide their behaviour (Van Teunenbroek, Bekkers, et al., 2020). Thus, with crowdfunding, trustworthiness and quality signals are critical elements impacting donations (Cavalcanti Junqueira et al., 2022; L. Liu et al., 2018). We argue that donors perceive a project creator as a reflection of the project’s quality.

Crowdfunding research suggests that a project creator's perceived reputation is related to the project's perceived credibility (Courtney et al., 2017; Kasri et al., 2021; E. Kim et al., 2022; L. Liu et al., 2018; Y. Zhang et al., 2022) and success (Borrero Domínguez et al., 2022; Bukhari et al., 2019; Lee et al., 2019). For instance, among religious-oriented projects, findings suggest that previous experience and accomplishments in crowdfunding matter (Bukhari et al., 2019). Projects with experienced project creators were more often successful than first-timers. Similar results were found among non-religious projects (Borrero Domínguez et al., 2022; Courtney et al., 2017; T. Kim et al., 2017; Lee et al., 2019; Qian et al., 2017; Skirnevskiy et al., 2017; Steigenberger, 2017; Usman et al., 2019; Wang et al., 2019; Y. Zhang et al., 2022). On the other hand, a project creator's credibility does not always affect giving. For instance, it was found that experience did not affect funding success after including cognition-promotion aspects: responding to questions, updates and rewarding sponsors (Koch et al., 2015; Yeh et al., 2019), which might be another way to gain respect.

Projects with an officially recognised non-profit status also tend to be more successful than projects without it (Hörisch, 2015). Chinese charities using donation-based crowdfunding focus on creating a reliable image by mentioning quality signals – e.g., project creators connected with international organizations or governments (H. Liu et al., 2021). Charities also present their previous work by highlighting earlier projects. By surveying respondents, research shows that the initiator's reputation (measured as the extent to which a potential donor believes the initiator is honest to the donors) correlates with the perceived quality of a project (Jiao et al., 2021).

On the other hand, creators with a higher research experience (e.g., professor) did not attract more donors to science-based projects than projects with more novel initiators (e.g., PhD candidates) (Sauermann et al., 2019). This contradicts the idea that the perceived quality of a project is vital for success, as an individual further in her career is more likely to deliver a high-quality project. Alternatively, donors might perceive projects from senior researchers as "adversely selected", thus, of lower quality because they were rejected by traditional funding sources (Sauermann et al., 2019). In addition, the need for help might be perceived as higher among junior researchers since they are at the start of their careers. The perceived need for help has been found to be an important influence on traditional giving (Bekkers & Wiepking, 2011).

Younkin & Kuppuswamy's (2018) finding highlights the subjectivity of quality signals. The researchers found that projects initiated by African American men are less likely to be funded and unconsciously perceived as lower quality than similar projects by Caucasian men. The bias can decrease with information about the prior success of African American initiators (Younkin et al., 2018).

*5.2 Social information*

Social translucence theory argues that donation activity should be visible online to achieve a common goal (Erickson et al., 1999); since donations rarely go offline, online cues are critical for decision-making (L. Z. Xu, 2018). A crowdfunding page reports the number of donors who supported the project, and some also mention the donation amounts of others. Both are examples of social information: information about the behaviour of others (Van Teunenbroek, 2020). Several studies report that donors are affected by social information in a crowdfunding context (see Table 1 in the supplementary information), which reflects a quality signal (Potters et al., 2001; Van Teunenbroek, Bekkers, et al., 2020)[[7]](#footnote-7).

*5.2.1 Perceived project quality and credibility of the project creator*

It is an economic assumption that people are rational and utility-maximizers, and donors prefer to donate to high-quality projects (Fishbach et al., 2011), as low-quality projects are of lower utility-maximization. Also, high-quality campaigns might provide qualitatively better rewards (J. G. Kim et al., 2020). However, people find it hard to judge philanthropic projects' and practitioners' quality, especially in a charitable context (Vesterlund, 2003). In such an ambiguous context, individuals often rely on others’ choices to guide their decision (Suls et al., 2002). Donors use information as a quality signal via a signalling effect (Potters et al., 2001), which occurs when potential donors feel uncertain about the project or creator’s quality and use peers’ decisions as a signal of high-quality (Andreoni, 2006). This way, individuals can use the experience of others to direct their behaviour (Erickson et al., 2000).

We expect quality signals to be essential for reward-based and donation-based crowdfunding (Burtch et al., 2013; Mollick, 2014). Asking experts to rate crowdfunding projects without knowing if donors backed them showed that experts often supported the same projects as donors (Mollick et al., 2016). This suggests that donors can be helpful in decision-making, especially when they are end users (e.g., visitors to a theatre).

A large field experiment at a Dutch reward-based crowdfunding platform using a random control setting shows that the donation amount of others increased funding by stimulating some donors to give high amounts, but it left the number of donors unaffected (Van Teunenbroek & Bekkers, 2020a). Similar effects were observed with donation-based projects (Raihani et al., 2015; Sasaki, 2019; Smith et al., 2015). For instance, a £10 increase in past donations increased donations by £2.50 (Smith et al., 2015). Mimicking a crowdfunding campaign, an online experiment shows that the donation amount of others did not affect the number of donations (Van Teunenbroek et al., 2021). These findings suggest that social information primarily impacts crowdfunding success by stimulating higher amounts rather than attracting a larger donor pool.

Adverse effects are also reported. A field experiment on a reward-based platform found that donating small amounts decreased the donation amounts of other donors (Zaggl et al., 2019). The researchers explain that this signals uncertainty and hesitation from the donor, which might decrease the perceived quality of a project. Conducting a field experiment at a donation-based platform, Koning & Model (2013) found that, at the beginning stage, projects assigned with a moderate-sized ($40) donation increased donations while small-sized ($5) donations decreased giving. Another example reports that fake social information had a short-term positive effect on reward-based projects and later negatively affected donations (Wessel et al., 2016). Perhaps quality signals are more profound in the beginning stage of a project (Cason et al., 2021; Koning et al., 2013; Van Teunenbroek & Bekkers, 2020a), when uncertainty abounds.

Projects supported by a company were more often successful than projects receiving no support from companies (Gangi et al., 2017). The researchers conclude that even with crowdfunding, donations from more competent and renowned donors can promote funding success, described as the endorsement effect of third parties (Stuart et al., 1999).

The impact of quality signals suggest a rational assessment of a project’s success (Mollick, 2014). Social information also explains failures when campaigns struggle to collect funds in the first weeks (Cason et al., 2021; Greenberg et al., 2013; Rijanto, 2018; Van de Rijt et al., 2014). Moreover, as the number of previous donors to a project increases, so do the odds of a new donor donating: the closer a crowdfunding campaign comes to the target amount, the higher the participation rate (Kuppuswamy et al., 2017, 2018; G. Li et al., 2019; Zvilichovsky et al., 2018), and donation amounts (Dai et al., 2019; Van Teunenbroek & Bekkers, 2020a).

*5.3 Rewards*

Crowdfunding feature: Reward-based crowdfunding projects offer tangible (physical items) and intangible rewards (like a unique experience or a digital product). Both may or not have a clear monetary value (Chinman, Wandersman & Goodman, 2005). In this case, donors seek to receive a reward even if their intentions are philanthropic. It is common to mix material and non-material rewards to explore the maximum consumer surplus (Dalla Chiesa et al., 2020), hence designing an effective reward structure (Wei Shi, 2018). Thus, we expect donors to be affected by rewards if: (1) they want to collect a tangible rewards, or (2) to collect an intangible reward .

*5.3.1 Collect a tangible reward*

The economic literature on philanthropy broadly discusses intrinsic (e.g., altruism, warm-glow, see Andreoni, 2006) and extrinsic (e.g. desire to acquire material rewards or other benefits, like t-shirts or event tickets) motivations. Some are motivated to give by material self-gain (Bekkers et al., 2011). If a donor requests a reward, this can partly be understood as a form of consumption (Bekkers et al., 2011). Material rewards offer "tangible benefits" with clear gratification (Allen et al., 1990).

The crowdfunding literature suggests that donors may want a proposed reward as compensation for a donation effort (Gerber et al., 2012; Ryu, Kim, et al., 2016; Ryu & Kim, 2016; Ryu et al., 2020). These donors can often be found in art, design, and game projects (Ryu & Kim, 2016), where charitable giving only partially explains donation. As the type of reward depends on the donation amount, the donor can modulate the value depending on the items available for pre-purchase. This type of donor is often younger than charitable donors (Ryu & Kim, 2016). Participants scoring higher on extrinsic motivation donate more to reward-based projects than intrinsically motivated donors (Cox et al., 2018). For charities, offering rewards could be harmful (Zhao et al., 2019). The researchers observed that projects connected to a charity attracted fewer donors if they also offered rewards than projects not offering rewards.

*5.3.2 Collect an intangible reward*

Donors can be motivated to gain experience and connect with others. Experience rewards are rather typical (i.e. intangible rewards), like visiting a university lab, participating in a dinner celebration, and accessing concerts. Via this, project creators focus more on an experience component (Thürridl et al., 2016) and connections with others (Bitterl et al., 2018). Theories from consumer behaviour explain that by choosing intangible rewards, donors can signal their commitment to a community (Allen et al., 1990). Moreover, social media studies report the importance of connectedness (G. M. Chen, 2011). Social psychology also considers social interactions a basic human need (Tomova et al., 2020), thereby giving could give the possibility to connect and network.

Intangible rewards excel in providing a connection with a charity (Bitterl et al., 2016; Hobbs et al., 2016; Van Teunenbroek & Smits, 2022). Running multiple experiments, Bitterl et al. (2016) found that donors connect strongly with a project by donating rather than buying a product. By interviewing project creators, it was found that rewards are facilitators of connection (Van Teunenbroek & Smits, 2022). Furthermore, Hobbs et al. (2016) found that intangible rewards are more attractive in the presence of celebrities (e.g., a famous filmmaker) (Hobbs et al., 2016).

*5.4 Project description*

Next to information on the project creator (previously discussed), the webpage also portrays project-related information focusing on the project's aim in the form of written information, a promo video and images. In other words: why the initiator is fundraising and how they will use the donations. These standardized project descriptions that aim to inform the public distinguish crowdfunding from conventional non-profit fundraising campaigns (Wash, 2013). The crowdfunding literature suggests that individuals are affected by the project description (see Table 1 in the supplementary information).

The description reflects the project's narrative. Narratives are anything recounted by any individual, oral, written or visual, fictional or non-fictional (Veenswijk et al., 2008), and play an essential role in people's lives, as narratives allow sensemaking and give meaning to interactions (Bruner, 1996; Nooij, Van Teunenbroek, Teelken & Veenswijk, 2023). This way, the project becomes more accessible to potential givers. This process of "projectization" (a term coined by Krause, 2014) provides a better view of what they are supporting (Alborough, 2017). Updates and comments are also information providers (Choy et al., 2016), which announce new rewards, and questions, provide new content (Xu et al., 2014), and community-building (Bao et al., 2022). Therefore, they are suggested to impact crowdfunding success (Kuppuswamy et al., 2018; Salvi et al., 2022; Usman et al., 2020). Moreover, an online experiment showed that donation-based projects featuring humans receive higher donations than in their absence (Weinmann et al., 2020). We argue that the project description affects giving because (1) donors use it to determine the quality of a project, (2) it evokes an emotional reaction, and (3) donors personally connect with the projects’ community.

*5.4.1 Perceived project quality*

Burtch et al. (2013) perceive project descriptions of donation-based projects as pitches in which initiators attempt to convince individuals to contribute via a short description of the project. Individuals can use project descriptions to screen and judge projects’ quality (Y. Wu et al., 2022). The underlying rationale is that projects can signal their credibility via the description, thereby reducing the information asymmetry between "projects and donors" - like other online transactions mediated by two-sided markets (Dalla Chiesa et al., 2020).

A project description can be perceived as a quality signal by increasing the trust someone feels towards a project (Behl et al., 2020; Ho et al., 2021; Y. Wu et al., 2022). By performing a thematic and lexical analysis, De Crescenzo et al. (2022) found that a compelling narrative (i.e., common among successful projects) mentioned: 1) problem/need, 2) project description, 3) goods and services offered to the person in need, 4) information about the initiators and 5) venture history. Their findings suggest that narratives should emphasize reassurance, reliability, and credibility. We understand that these aspects build transparency (Spanos, 2018).

Roe (2016) used a survey experiment to test if reward-based project videos use an significant argument (i.e., cognitive decision-making via the central route, see elaboration likelihood model, Petty et al., 1983), based on description content, rather than the explicit argument (i.e., affective decision-making via the peripheral route, Petty et al., 1983). Some people use either route more often (Petty et al., 1998). Their results showed that donors are more frequently persuaded by the “argument” (worth or merit) made in a video than by the feelings they get from watching it. This suggests that the quality of the project is an important influence on the decision to donate.

Projects with spelling errors had a lower success rate than those without. Regardless of the crowdfunding model (Ho et al., 2021; Mollick, 2014), the findings suggest that written descriptions should remain understandable to a broad public without appearing unprofessional (Gascón et al., 2015; Salvi et al., 2022). For instance, projects featuring radical, innovative ideas are less likely to be funded because the project's aim is harder to understand (Chan et al., 2017).

It is a thin line between transparency and too much information (Aprilia et al., 2017; Bi et al., 2017; Sokolova et al., 2018; Sulaeman, 2017; L. Z. Xu, 2018). Researchers found that the length of the project description and the number of images increase donations (Kubo et al., 2021; Y. Wu et al., 2022), while a lengthy text (P. H. Kim et al., 2016; X. Zhang et al., 2022) and the number of technical terms decrease donations (Y. Wu et al., 2022). Kubo et al. (2021) suggest that this effect follows an inverted U-shape: long and concise project descriptions are associated with unsuccessful campaigns, as are short descriptions.

A narrative can also be displayed via videos and images, which enhance media richness in online communication (Lodhia, 2012), and videos are also essential to communicate a project's quality (Courtney et al., 2016; Hobbs et al., 2016). Some even suggest that visuals affect quality assessments more than written descriptions. Based on Kickstarter, Kim et al. (2016) found that video narratives are more impactful than only written ones.

*5.4.2 Emotional reaction*

A compelling narrative is essential since it can evoke emotions, which is essential for giving (Wang, Zhang & Tong, 2022). For instance, projects that address social issues evoking cognitive empathy are more likely to be supported than business-like projects (Nakagawa et al., 2022). The philanthropic literature mostly suggests that a positive rather than a negative framing increases giving (Bekkers et al., 2011): happy people give more than others (Kushlev et al., 2022).

This is supported by a part of the crowdfunding literature (Defazio et al., 2021; Rhue et al., 2018; Y. Wu et al., 2022; Yi et al., 2022), but most of the studies support “negative framing”; both for donation-based (Kim, Kang & Engel, 2021; Rhue & Robert, 2018) and reward-based crowdfunding (S. Chen et al., 2016; P. H. Kim et al., 2016; Kuo et al., 2022; Moradi et al., 2019; Yazdani et al., 2021). Using an online experiment, Kuo, Lin & Liu (2022) found that negative messages lead to more donations than positive ones. Guilt, to some extent, can increase donations (S. Kim et al., 2022). This compels the responsibility to donate to improve any given situation. Rossolini, Pedrazzoli and Ronconi (2021) also conclude that this effect is more nuanced as it depends on the project category (i.e., arts, charity, product-based, etc.). Studying campaigns in the "community and environment" category, they found that negative framing worked better for clean energy and climate-reservation projects but not for agri-food campaigns (e.g., organic food production). Positive framing thus tends to work better for pro-social projects (Allison et al., 2015) and negative for pro-environment goals.

*5.4.3 Community Belonging*

The project creator can also highlight a specific community connected with the project (Ein-Gar, 2018; Josefy et al., 2017; Paust, 2021), an essential component of crowdfunding (Booth, 2015; Donelli et al., 2022; Josefy et al., 2017; E. Kim et al., 2022; Paust, 2021; F. Zhang et al., 2022). Some feel a strong belonging need (i.e., the human preference to be included by a valued group, see Baumeister et al., 1995) to a specific community (Bürger et al., 2021; Kościółek, 2021). We argue that some donors donate to support a particular community (Ahn, 2022; Gerber et al., 2012).

Ein-Gar (2018) found that highlighting the word 'community' resulted in higher donations. The positive effect is mediated by connectedness with the community aimed at the project (in this case, a Jewish community). Moreover, while communities are often hosted online by social media platforms, offline contact can also have a positive effect. Paust (2021) used discourse analysis to review health-oriented projects and found that narratives are individualized: focusing on one person or community instead of a common good. Traditionally focusing on common goods is a critical component of charitable giving (Payton, 1988), but it seems that crowdfunding donors expect more specificity than generality.

Crowdfunding can allow donors to feel part of a community because they are part of its development. In other words, “they made it happen”. Sharing updates about the project's development signal honesty (e.g., project changes) and facilitate interactions (Ahrens et al., 2019). Via updates, initiators can show their appreciation (A. Xu et al., 2014), which is expected to increase donor involvement (Gadon, 2020).

Asking an ambassador to intermediate relations configures a form of credible community-building among crowdfunding donors (Gleasure et al., 2018). Researchers further demonstrated that the intention to back projects of like-minded individuals depends on the type of project (Bürger et al., 2021). Backers of cultural and artistic projects constitute a distinct community that is often intrinsically motivated to support art and connect with like-minded individuals, unlike other types of campaigns.

**6.0 Discussion and conclusion**

The literature on crowdfunding has yielded several insights for philanthropy. First, crowdfunding features share similarities and differences with traditional giving behaviour. An explanation of the mechanisms explaining the effects is, however, absent. By reviewing the literature, we identified four features affecting donating via crowdfunding: a) project creator, b) social information, c) rewards, and d) project description. The project creator is the individual collecting funds. Social information is often mentioned in online campaigns in the form of the number of donors and the donation amounts of others. Some projects offer rewards, which can consist of tangible (e.g. an art product) or intangible rewards (e.g. unique experience). Crowdfunding webpages provide elaborate project descriptions and explain the project's aim.

Further, building on the broader literature of social psychology, behavioural economics, consumer behaviour and philanthropy, we propose a model with ten mechanisms to explain why these features impact giving (see Figure 3). We conclude that the mechanisms are connected to multiple features and can be summarised in three themes: (1) quality signals, (2) social aspects and (3) tangible rewards. Quality signals reflect the project's and the creator's credibility through trust and utility. Social aspects are reflected via the relationship with the creator, intangible rewards and project description. For this, ties’ strength, community-building and emotional responses are vital. Tangible rewards reflect a donor's desire to gain a particular reward, which reflects consumer behaviour.

We make four suggestions for future research. First, we unveil an unanswered aspect: the relative influence of each mechanism—whether the crowdfunding features primarily affect donating because they reflect quality signals, social aspects or tangible rewards—is still unclear. Multiple mechanisms are likely to operate simultaneously, and their combinations might differ across time, contexts, project types and donors. There are also expected interaction effects: quality signals are more critical if donors care about tangible rewards.

Second, in addition to the already studied gender and racial effects on campaign success, other personal features of donors (e.g., personality traits and socioeconomic characteristics) are likely to moderate the impact of the mechanisms. Regarding socioeconomic characteristics, crowdfunding demographics deserve wider worldwide comparisons (Van Teunenbroek & Hasanefendic, 2022). Studying the influence of individual characteristics in combination with socioeconomic data would be fruitful. A challenge for future research is thus to investigate which combination of individual and contextual features brings more benefits to donors and creators. Which crowdfunding mechanisms are more evident in different demographics or donor segments?

Third, the features and mechanisms' effect might depend on the project type and the project creator. Crowdfunding projects are hosted mainly by individuals or groups of individuals, but charities, companies and institutions are also present (Van Teunenbroek & Hasanefendic, 2022). At the moment, we consider the literature underdeveloped on this subject, and we cannot describe how the type of project creator impacts the effect of the features and mechanisms of our model.

Fourth, we suggest increasing donation behaviour as much as possible by adhering to “the most effective stimulants” We advise a focus on “clean” manipulations with proper explanations for their hypothesized effects (Van Teunenbroek, Bekkers, et al., 2020). In other words, few studies have tried to examine potential mediators to understand “why” the effect occurs. Instead, researchers have mainly focused on identifying crowdfunding features without adequately explaining why they impact giving. This requires theorisation, which our article aimed to initiate by unveiling key mechanisms.

We focussed on the key features that characterize crowdfunding, thereby offering a picture of its unique mechanisms. Typical mechanisms such as target amounts (i.e. the minimum amount initiators need to collect) and social media effects are not thoroughly discussed due to prior extensive research and often disputed results: some say that high amounts are best (e.g. Sauermann et al., 2019), while others argue for moderate target amounts (e.g. Cordova et al., 2015). Such results are based solely on data scraping, which impedes causality.

Future investigation is necessary to test our proposed model and further map the effects of social information on individual and contextual donor characteristics. This is in the interest of scholars who aim to help this scientific field become more responsive to the advancements of digitalization and the subsequent changing landscape of giving behaviour.

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1. <https://cofundhealth.com/> [↑](#footnote-ref-1)
2. <https://steunmijnonderzoek.hartstichting.nl/updates/3424-crowdfunding-voor-innovatief-onderzoek-van-start> [↑](#footnote-ref-2)
3. <https://www.artfund.org/supporting-museums/programmes/art-happens> [↑](#footnote-ref-3)
4. <https://www.fundsurfer.com/crowdfund/drones-for-the-ukrainian-army> [↑](#footnote-ref-4)
5. <https://www.justgiving.com/crowdfunding/turkey-earthquake-necessities-istanbul> [↑](#footnote-ref-5)
6. Information can refer to many different aspects, but most typically relates to the platform, the project, or the creator. [↑](#footnote-ref-6)
7. Recent studies suggest that the online context impacts the way social information is perceived. A literature review on social information effects suggests that social information can, for instance, be interpreted as a social norm and a quality signal (Van Teunenbroek et al., 2020). The authors also describe that the context likely interacts with the mechanisms explaining social information effects. A later study suggest that social information is interpreted as a quality signal, if shown online (Van Teunenbroek, 2021). In the absence of others, social pressure is less profound and the researcher found not support for social norms mediating the effect of social information (Van Teunenbroek 2021; Van Teunenbroek et al., 2021). They suggest, which we follow, that social information presented in an online context is interpreted as a quality signal of the project. [↑](#footnote-ref-7)