A trust-based crowdfunding campaign marketing framework: theoretical underpinnings and big-data analytics practice

Prince Baah-Peprah and Rotem Shneor*

Department of Strategy and Management,
School of Business and Law,
University of Agder,
Gimlemoen 19, 4630 Kristiansand, Norway
Email: prince.baah-peprah@uia.no
Email: rotem.shneor@uia.no
*Corresponding author

Abstract: Crowdfunding research often understates the campaign marketing dynamics that are at play. In this paper, we develop a trust-based crowdfunding campaign marketing framework (TCMF). Since trust underlies online transactions our framework highlights four trust conditions (trust deficit, information trust deficit, relationship trust deficit, and trust surplus) fundraisers face when launching their campaigns, each requiring a different marketing strategy (minimalist, technician, influencer, and innovator) for enhancing trust between fundraisers and prospective funders. Moreover, we compare the TCMF with earlier theoretical frameworks, while highlighting its unique contributions. Finally, we suggest the application of big data analytics in practical use of the TCMF.

Keywords: crowdfunding; trust; marketing; content quality; social spread; big data; social media.

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Biographical notes: Prince Baah-Peprah is a Doctoral Research Fellow at the University of Agder's School of Business and Law and a member of its Crowdfunding Research Centre. He holds a Master's in International Management from the UiA. His research interests lie in marketing strategies in crowdfunding while examining regional and contextual heterogeneities. Based on his background in management, accounting, and finance, he has previously researched entrepreneurial financing and private equity investment in emerging markets.

Rotem Shneor is an Associate Professor at the University of Agder's School of Business and Law in Norway and leads its Crowdfunding Research Center. He established the Nordic Crowdfunding Alliance, as well as co-founded and currently serves on the board of the Norwegian Crowdfunding Association. He is also an affiliate researcher at the Cambridge University Center for alternative finance and co-author to its annual industry reports. He has published in various academic journals, trade magazines, and contributed several chapters to edited volumes. He is also lead editor and author of a recent book, *Advances in Crowdfunding: Research and Practice*.

1 Introduction

Crowdfunding is a method of fundraising, where small financial contributions are collected from a potentially large group of backers, while using the internet, and often without the involvement of standard financial intermediaries (Mollick, 2014). Such practice involves fundraisers' (i.e., entities requesting funds) interaction with prospective backers (i.e., entities contributing funds) via a platform (i.e., an intermediary facilitating communications and transactions) about a concrete campaign or loan request (i.e., a web-based presentation of a project to be funded and the conditions surrounding it). In the past decade, crowdfunding has been growing dramatically, with global volumes estimated to be surpassing USD300 billion in 2018 (Ziegler et al., 2020). Unsurprisingly, this development has attracted much interest from academics, practitioners, and policy markers.

Crowdfunding is manifested through a wide range of fundraising models. At the most fundamental of levels, such models may be categorised as either 'investment models' or 'non-investment models' (Belleflamme and Lambert, 2016) depending on the types of compensation backers expect to receive in return for their financial contributions. Investment models include variants of crowdlending and equity crowdfunding offering financial returns to investors, while non-investment models include variants of reward and donation crowdfunding offering tangible and intangible non-financial returns to consumers and donors, respectively.

Regardless of model, crowdfunding incorporates a degree of risk embedded in the uncertainty surrounding a fundraiser's ability to deliver on campaign promises (Shneor and Munim, 2019) either in terms of possible deviations from plans or outright loan defaults (Lin et al., 2017; Yoon et al., 2019), business failures and bankruptcies (Wojahn and Wilms, 2020), as well as late or non-delivery of pre-purchased products (Appio et al., 2020). In addition to the risks inherent to crowdfunding practice, and while not representing mainstream developments, there has also been growing concerns with ethically questionable practice as captured by anecdotal evidence in cases suspected of fraud at both the platform and fundraiser levels (Shneor and Torjesen, 2020). In such cases, opportunities for intentional or unintentional abuse of power, misinformation, quality compromises, or incidents of hurting other stakeholders may emerge under pressures to perform successfully and in a very publicly transparent manner (Shneor and Torjesen, 2020).

Trust is a critical element that may help mitigate risks and uncertainties in online exchanges (Kim and Peterson, 2017; Pavlou and Chai, 2002), as well as enhance financial risk tolerance (Rahman et al., 2019). Accordingly, a growing body of literature has sought to investigate the role of trust in crowdfunding. Such studies find that trust enhances crowdfunding contribution intentionality in both investment and non-investment crowdfunding models (Chen et al., 2014; Kang et al., 2016; Liang et al., 2019; Zhang et al., 2020), as well as campaign success (Zhao and Vinig, 2019). Moreover, a different line of research at a macro level, considers trust conditions in various markets and their conduciveness to crowdfunding market development either conceptually suggesting such a positive relation (Kshetri, 2015), or empirically validating it with respect to crowdfunding volumes per capita (Ziegler et al., 2020).

Beyond these initial findings, research on trust in crowdfunding practice largely remains untapped. However, since the act of crowdfunding implies that fundraisers actively engage in online marketing of their projects to prospective backers (Belleflamme

et al., 2015; Chen et al., 2016), valuable and closely related insights are adopted from studies of trust in e-marketing.

In the current study we wish to shift the focus from empirical validation of the association between trust and contribution intentionality and take it as a given. Instead, we aim to answer: *what fundraisers can do to enhance the trust of prospective backers? And how do such actions vary under different initial trust conditions?* – this line of inquiry is deemed especially relevant considering earlier claims that crowdfunding campaigns are often designed based on intuition rather than on strategy (Kaartemo, 2017; Thürridl and Kamleitner, 2016). Furthermore, while research identifying the drivers and barriers to campaign success has proliferated in recent years (Kaartemo, 2017; Shneor and Vik, 2020), it often fell short of translating findings into holistic strategic approaches, only offering specific insights about the use of concrete campaign elements. Hence, a need for more general strategic approach remains.

For this purpose, we engage in a theory development effort while proposing a trust-based crowdfunding campaign marketing framework (hereafter 'TCMF') capturing different marketing strategies that can help fundraisers enhance prospective contributors' trust under differing pre-launch trust conditions. Specifically, we suggest four initial trust conditions representing combinations of either trust deficit or surplus with respect to two types of trust – calculus and relational trust. According to Kang et al. (2016), calculus trust or 'trust from the head' refers to trust created based on evaluation of conditions and information weighing costs and benefits, while relational trust or 'trust from the heart' refers to trust created based on repeated interaction between individuals over time that involves elements of care and concern. Each trust condition is then matched with a campaign e-marketing strategy that aims to both address trust deficits and leverage trust surpluses. This framework is then supported by a list of propositions arguing which strategy will be most effective at enhancing trust under each of the pre-launch trust conditions.

Later, the suggested trust-based framework will be compared to two earlier frameworks that can also be used for strategic design of crowdfunding campaigns. First, we compare the TCMF to an alternative persuasion-based theory, namely Petty and Cacioppo's (1986) elaboration likelihood model (hereafter 'ELM'). Second, we compare the TCMF to a typology of reward-based crowdfunding campaigns (hereafter 'RCC') as suggested by Kraus et al. (2016). This discussion will review the commonalities and differences between the frameworks, while highlighting the unique contributions of the suggested TCMF with respect to each. Overall, we argue that the TCMF offers greater concreteness and contextualisation when compared to the ELM, and greater theoretical-anchoring, cross-model generalisability, as well as campaign strategy diversity when compared to the RCC.

Finally, translating theory into practice, we build on studies heralding the use of big data in marketing (Camilleri, 2020; Ducange et al., 2018; Fan et al., 2015), as well as for trust assessments (Roy et al., 2017), and review the opportunities for its application in support of our suggested TCMF. First, using it for assessing pre-campaign trust conditions, which inform marketing strategy choices. And second, using it for assessing effectiveness of selected marketing strategies in enhancing contributions to, and promotion of, crowdfunding campaigns.

The remaining of the paper is structured as follows. First, we present a literature review of studies investigating the importance and manifestations of trust in online marketing, as well as in crowdfunding practice. Next, we suggest the TCMF, and outline

a list of propositions capturing the fit between different marketing strategies and different trust enhancement goals, as emerging from different pre-launch trust conditions. Later, we engage in a discussion comparing the TCMF with the ELM and RCC for highlighting the TCMF's contributions and unique value propositions. This theoretical discussion will then be followed by a review of opportunities for using big data and social media analytics for translating the theory into a concrete practical approach. Finally, the study concludes by suggesting related implications for research and practice.

2 Literature review

Trust reflects a willingness of one party to rely on another party and to act while becoming vulnerable to actions of the other party (Doney et al., 1998). According to Ba (2001), trust is defined in terms of its three central characteristics: reliability, predictability, and fairness. In e-marketing, trust lies in the consumer's subjective confidence in the e-marketer while accepting vulnerability to the actions of the e-marketer (Bart et al., 2005). The dimensions of online trust include competence/ability, integrity, and benevolence (Chen and Dhillon, 2003; Gefen, 2002). Due to the uncertainty, spatial separation, and information asymmetry often characterising online exchanges, gaining consumer trust is considered as one of the most critical challenges of online marketing (Ba, 2001; Gefen et al., 2003; Ibeh et al., 2005; Kim and Peterson, 2017). In their review, Urban et al. (2009) found that online trust goes beyond privacy and security concerns, and is closely connected to website design, its formation is an ongoing process, and is heterogeneous across individuals and products.

Ba (2001) suggested that trust in business relations develops from calculus-based trust to information-based trust, and eventually into transference-based trust. *Calculus-based trust* is an on-going economic calculation whose value is derived by comparing the outcomes resulting from creating and sustaining the relationship to the costs of maintaining or severing it. *Information-based trust* is formed based on accumulated knowledge and experience, whereas relations develop, the parties gain more information about each other and create a degree of predictability about their likely actions under different conditions. *Transference-based trust* is that which is indirectly transferred from a trusted partner to a less known one. Here, one party develops trust to a 3rd party based on its existing trust to a 2nd party that endorses the 3rd party.

A different approach, presented by Johnson and Grayson (2005) in their analysis of trust in service relations, distinguished between cognitive and affective trust. *Cognitive trust* reflects a customer's confidence or willingness to rely on a service provider's competence and reliability, based on accumulated knowledge and experience. *Affective trust* reflects the confidence one places in a partner based on feelings generated by the level of care and concern the partner demonstrates, and is, therefore, based more on emotions rather than knowledge.

More recently, Kang et al. (2016) presented an approach suggesting a differentiation between *calculus trust* and *relationship trust*, which both synthesised earlier conceptualisations and was verified in a crowdfunding context. In this typology, the former refers to trust created based on evaluation of conditions and information weighing costs and benefits, while the latter refers to trust created based on repeated interaction between individuals over time that involves elements of care and concern. We will later use this classification in our conceptual development.

Since trust-building mechanisms reduce uncertainties arising from information asymmetries in exchange transactions, trust-building mechanisms are crucial to the prosperity of on-line marketplaces (Anderson and Swaminathan, 2011; Elliott and Speck, 2005; Greiner and Wang, 2010; Wang and Emurian, 2005). According to Brynjolfsson and Smith (2000) the main elements used to signal trust in online marketing include building a secure website, detailed quality content, and social media management. Similarly, a review of related research by Wang and Emurian (2005), identified four trust-inducing features including graphical design, structural design, content design, and social-cue design. In crowdfunding, the platform provides the secure website through which exchanges between fundraisers and backers are facilitated in accordance with pre-specified conditions (i.e., graphical and structural designs), while the fundraiser is tasked with providing detailed quality content and create the necessary social media engagement promoting their project to prospective backers (Shneor and Flåten, 2015).

2.1 Quality content provision

Content refers to the substantive information being conveyed in a message (Hilligoss and Rieh, 2008). In e-marketing, content is considered as key to an effective marketing program, and includes both static information forming web-pages and dynamic rich media information such as videos, podcasts, user generated messages, and interactive features (Holliman and Rowley, 2014). According to Rieh (2002), quality information influences an audience's perceptions as the information it conveys is thought to be credible and worthy of trust.

Earlier research in the business-to-consumer context shows that information quality positively impacts consumers' perceived value of- and loyalty intentions towards – a website (Kim and Niehm, 2009), as well as their satisfaction from using it (Lin, 2007). Consumers perceptions about efforts to provide quality content by sponsors of virtual communities positively influenced their sense of shared values and respect towards these sponsors, both of which positively impacted their trust towards the sponsors (Porter et al., 2012). Furthermore, the quality of commercial information shared on social networking sites was found to enhance consumer trust, which in turn enhanced purchase intentions and word-of-mouth intentions (Kim and Park, 2013). Similarly, in a business-to-business context, perceived information quality was found to significantly reduce perceived risks and enhance trust in interorganisational data exchanges (Nicolaou and McKnight, 2006).

In crowdfunding research, campaign content elements are some of the most frequently studied predictors of campaign success across crowdfunding models (Kaartemo, 2017; Shneor and Vik, 2020). Here, most studies find that successful outcomes of crowdfunding campaigns are positively associated with the length and detail of campaign texts (i.e., Aprilia and Wibowo, 2017; Greiner and Wang, 2010; Kunz et al., 2017), the use of concrete and precise language (i.e., Larrimore et al., 2011; Parhankangas and Renko, 2017), the number of updates provided by the fundraiser (i.e., Berliner and Kenworthy, 2017; Lechtenbörger et al., 2015; Li et al., 2016), as well as the inclusion of videos as dynamic content (i.e., Angerer et al., 2017; Josefy et al., 2017; Mollick, 2014).

However, these studies often used indicators capturing the availability and length of content elements, rather than evaluations of their actual quality (Shneor and Vik, 2020), leading to an underestimation of the variance in content quality. Such variance may serve as an explanation for contradictory findings in a minority of studies showing

non-significant and negative effects also with respect to text length (i.e., Genevsky and Knutson, 2015), language concreteness (i.e., Allison et al., 2015), number of updates provided by fundraiser (i.e., Kromidha and Robson, 2016), and video inclusion (i.e., Frydrych et al., 2014), among others. The few studies that did examine quality aspects of campaign content have usually identified a positive association between campaign success and quality content (i.e., Calic and Mosakowski, 2016; Chan and Parhankangas, 2017; Hobbs et al., 2016). Furthermore, a recent study by Zhang et al. (2020) showed a significant positive association between information quality assessments and platform trust, which in turn impacts crowdfunding contribution readiness.

Furthermore, a recent study by Shneor et al. (2021) examined the role played by campaign content elements in campaigns success in different social trust contexts. It showed that elements associated with the central route to persuasion were more prevalent in campaigns from a low trust society than a high trust one, and that certain elements associated with the peripheral route to persuasion were more prevalent in campaigns from high trust societies than low trust societies. Hence, suggesting that the tweaking of various campaign content elements may serve to overcome relevant trust barriers in different contexts, while improving likelihood of campaign success.

2.2 Social media engagement

Once quality content is created, the next challenge is in ensuring it reaches a relevant audience of consumers. E-marketers aim to trigger social spread of marketing messages through viral marketing, which is defined as an exploitation of existing social networks by encouraging consumers to share product information with their friends (Leskovec et al., 2007). Such approach seeks to tap into the value of 'social proof', as in when individuals look to the actions of others for clues about what constitutes appropriate action they should follow (Cialdini, 1993).

The key vehicle for achieving this is known as e-word-of-mouth (hereafter 'eWOM'), which captures statements made by potential, actual, or former customers about a product or company that are made available to the public via the internet (Hennig-Thurau et al., 2004). Such statements can come in various forms such as consumer reviews and endorsements, or via the sharing of information created by others, including ads and promotional materials. Nevertheless, marketers are concerned with 'valuable virality', where promotional information is not only shared but is actually beneficial in terms of eliciting positive evaluations, purchase intentionality and behaviour (Akpinar and Berger, 2017). In this context, Pihlaja et al. (2017), distinguish between anonymous eWOM and social eWOM, claiming that since the latter represents information from known senders it is deemed more trustworthy and hence also enables better decision-making.

Earlier research shows eWOM contributes to reducing information asymmetries in consumer markets (Manes and Tchetchik, 2018). Furthermore, it shows that positive eWOM enhances consumers' positive attitudes and trust, as well as perceived quality and purchase intentions (Ladhari and Michaud, 2015). Others suggest that its enhancement of purchase intentions is moderated by trust (See-To and Ho, 2014). Moreover, while higher number of positive reviews enhances product purchase intentions, when these become too informative, prospective consumers may experience information overload weakening such effect (Park and Lee, 2008). Overall, a meta-analysis of research on the effects of eWOM finds a positive association with sales, but the effectiveness of which differs by platform, product, and metric factors (Babić et al., 2016).

In the context of crowdfunding, social media engagements are integral to the very nature of fundraising, where fundraisers are tasked with reaching, informing, and persuading members of the crowd to contribute both financially and in sharing information about the campaign (Shneor and Munim, 2019). Accordingly, literature reviews on research examining factors impacting crowdfunding success across models have shown it to be impacted by various indicators of social media engagements and endorsements (Kaartemo, 2017; Shneor and Vik, 2020).

Here, studies show that campaign success is associated with a fundraiser's network size and number of social media contacts (i.e., Kunz et al., 2017; Lin et al., 2012; Vismara, 2016), the extent of social media shares of campaign information (i.e., Efrat et al., 2020; Hobbs et al., 2016; Wessel et al., 2017), backers' posting commentary and feedback (i.e., Adamska-Mieruszewska et al., 2019; Berliner and Kenworthy, 2017; Lechtenbörger et al., 2015; Yum et al., 2012) and resulting interactions when fundraisers respond to them (Zhao and Vinig, 2019), as well as external public endorsements (i.e., Ahlers et al., 2015; Bukhari et al., 2020; Calic and Mosakowski, 2016; Greiner and Wang, 2010).

Here, again, while the above findings properly represent the general trends, a few inconsistent results are also evident in some studies, and mostly include non-significant and rarely a negative effect with respect to network size (i.e., Colombo et al., 2015; Hobbs et al., 2016) and certain modes of external public endorsements (i.e., Butticè et al., 2017; Guo et al., 2015). Such inconsistencies may be explained by ignoring the actual content of related eWOM messages that may be both positive and negative (Hennig-Thurau et al., 2004), or by nonlinear relations, where too much information may at some point lead to information overload and negative effects on related outcomes (Park and Lee, 2008).

3 Suggesting the TCMF

Crowdfunding practice implies that fundraisers actively engage in online marketing of their projects to prospective backers (Belleflamme et al., 2015; Chen et al., 2016). Hence, crowdfunding can be considered as one manifestation of online marketing. As such, it shares the criticality of gaining prospective backers' trust due to the conditions of uncertainty, spatial separation, and information asymmetry typical of online markets (Ba, 2001; Gefen et al., 2003; Ibeh et al., 2005; Wang and Emurian, 2005).

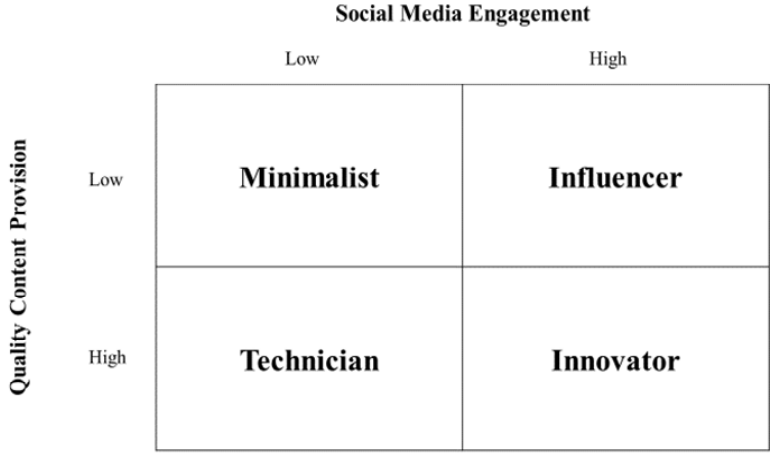
However, uncertainties in crowdfunding are further exacerbated by the fact that most fundraisers are often less known players offering products and services before they are fully developed (Zvilichovsky et al., 2018), while presenting them on relatively young platforms, which themselves operate under ambiguous regulatory conditions in many jurisdictions (Shneor and Flåten, 2015; Shneor and Torjesen, 2020). Unsurprisingly, against this backdrop, a growing body of research provides empirical evidence for the importance of trust in enhancing crowdfunding contribution intentions in both investment and non-investment models (Chen et al., 2014; Kang et al., 2016; Liang et al., 2019; Zhang et al., 2020).

In the current paper, we propose a TCMF. Here, since providing quality information and creating social media engagement are two of the most critical trust-enhancing elements of online marketing (Brynjolfsson and Smith, 2000), and since both have proven fundamental for crowdfunding practice success across crowdfunding models

(Kaartemo, 2017; Shneor and Vik, 2020), we suggest a 2 × 2 framework outlining four marketing strategies reflecting different configurations of intensity along these activities.

The suggested four strategies include the following: a '*minimalist*' marketing strategy is that in which fundraisers invest little in creating quality campaign materials and in social media engagements; a '*technician'* marketing strategy is that in which fundraisers develop high quality campaign materials investing in the detail and breadth of such information, while investing less in encouraging social media engagements; an '*influencer*' marketing strategy is that in which fundraisers invest less efforts in development of quality campaign materials, but are highly active in developing and supporting high intensity social media engagements; and an '*innovator*' marketing strategy is that in which fundraisers invest much effort both in developing high quality campaign materials and in developing high intensity social media engagements. Figure 1 presents these classifications graphically.

Figure 1 TCMF – strategies



We further suggest that each of these strategies will be more effective in winning a prospective backer's trust when employed for addressing different prevailing trust conditions at the time of campaign launch. Building on the discussion above, we define trust conditions as those reflecting the general public's degrees of calculus and relational trust towards the fundraiser at the time of their campaign launch. Accordingly, four pre-launch trust conditions are suggested.

'*Trust surplus*' is the condition in which a fundraiser enjoys high levels of both calculus and relational trust. Such condition may be typical of a well-established, famous, or experienced fundraiser proposing a familiar project with a clear value proposition (for example – a popular musician raising funds for a new album release, a well-established non-profit fundraising for a new charity project, etc.).

'*Informational trust deficit*' is the condition in which a fundraiser suffers from low levels of calculus trust but enjoys high levels of relational trust. Such condition may be typical of two different fundraisers. First, a well-established and well-connected fundraiser proposing an innovative and riskier concept where ability to deliver on promises and create value is relatively uncertain (e.g., a successful entrepreneur's fundraising for a new highly ambitious technological project). Second, a fundraiser for a

small-scale project collecting funds from a small group of well-familiar prospective backers (e.g., a local sports club fundraising for a local sports event, etc.).

'*Relational trust deficit*' reflects a condition in which a fundraiser enjoys high levels of calculus trust but suffers from relatively low levels of relational trust. Such conditions may be typical of fundraisers that are highly competent in their line of work but may be less extroverted or uncomfortable with required interpersonal dynamics in marketing and sales (for example – high-tech entrepreneurs more focused on technical perfection than customer satisfaction, cultural entrepreneurs more focused on artistic expression and quality than popular approval, etc.).

Finally, a '*trust deficit*' refers to the condition where a fundraiser suffers from low levels of both calculus and relational trust. Such condition may be typical of inexperienced fundraisers proposing innovative and novel products or services, and therefore need to tackle both the liability of newness as well as the uncertainties underlying their project (e.g., the early days of any budding entrepreneur, artist, social activist, etc.).

3.1 Propositions and conceptual integration

At the heart of the TCMF is the assumption that since crowdfunding campaign success depends on establishing backer trust, and since each fundraiser operates from a different trust condition at the time of campaign launch, each are expected to employ different strategies for overcoming trust gaps, as well as leveraging trust surpluses, in their campaign marketing efforts.

Here, since a *minimalist* strategy assumes that success can be achieved without heavy investments in either content quality or social media engagements, it presupposes that the fundraiser already enjoys high levels of overall trust, including both calculus and relational trust, among prospective backers. In such cases, fundraisers aim to invest as little resources as possible for triggering contributions from their prospective backers, while reaping the benefits of existing high levels of trust such backers already have towards the fundraiser. Accordingly, we propose the following:

P1: A minimalist marketing strategy will lead to campaign success under conditions of overall trust surplus, but not under other trust conditions.

A *technician* strategy assumes that success can be achieved without heavy investments in social media engagement but does require such investments in provision of quality content. Quality content is likely to have a greater contribution in enhancing calculus trust by answering prospective backers' concerns with detailed information presented in an attractive way. Such approach answers trust needs under market conditions of a calculus trust deficit, where fundraisers may enjoy existing high levels of relational trust but are required to invest in improving their calculus trust standing. Hence, we propose the following:

P2: A technician marketing strategy will lead to campaign success under conditions of informational-trust deficit, but not under other trust conditions.

An *influencer* strategy assumes that success can be achieved without heavy investments in quality content but does require such investments in social media engagements, either leveraging existing levels of fame and followership of a fundraiser, or for other scale considerations. Social media engagements are likely to have a greater contribution in

enhancing relational trust by answering prospective backers' concerns through the achievement of social proof, receiving third party endorsements, and tapping into an opportunity to further deepen an existing loose relations. Such approach answers trust needs under market conditions of a relational trust deficit, where fundraisers may enjoy high levels of existing calculus trust but need to improve their relational trust standing. Hence, we propose the following:

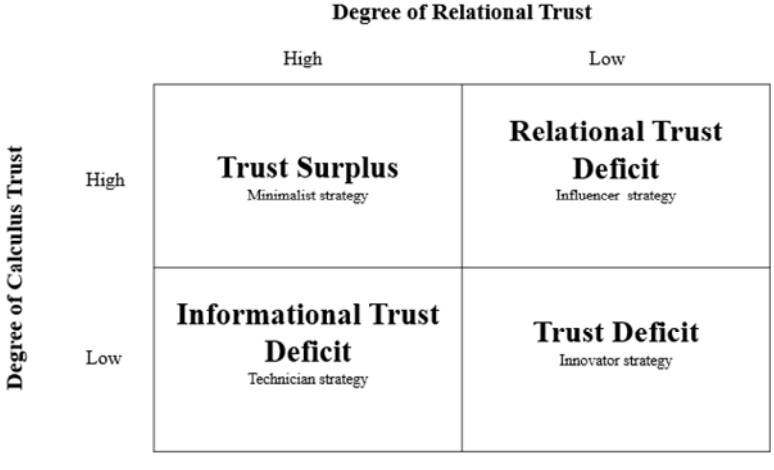
P3: An influencer marketing strategy will lead to campaign success under conditions of relational-trust deficit, but not under other trust conditions.

Finally, an *innovator* strategy assumes that success can be achieved by heavily investing in both the provision of quality content and social media engagements. As presented earlier, while quality content is expected to enhance calculus trust, social media engagements are likely to enhance relational trust. Such approach answers trust needs under market conditions of overall trust deficit, where fundraisers need to improve both their initial calculus and relational trust standing. Hence, we propose the following:

P4: An innovator marketing strategy will lead to greater campaign success under conditions of overall trust-deficit, than under other trust conditions.

Figure 2 graphically summarises which marketing strategies are expected to be most effective in promoting crowdfunding campaigns success under each pre-launch trust conditions faced by the fundraisers.

Figure 2 TCMF – trust conditions



4 Discussion

Building on both e-marketing and crowdfunding research that highlight the role of trust, its expressions and impact, an integrative framework of trust-based crowdfunding marketing strategies (TCMF) has been outlined. This framework links pre-launch trust conditions and campaign marketing strategies that are expected to best mitigate trust deficits while leveraging trust surpluses in support of more successful campaign outcomes. To assess the potential contributions of the TCMF, it is important to compare

it to other relevant frameworks that may aid in answering similar questions about effective marketing communication.

In this respect, earlier research into marketing strategy in the context of crowdfunding has mostly drawn on the ELM (Petty and Cacioppo, 1986; Petty et al., 1983). The ELM proposes that persuasion in communication can be achieved through cues processed in a central and/or a peripheral route. The former refers to extensive consideration of the message arguments that leads to attitude formation, change, or endurance that is more persistent and predictive. The latter refers to little investment of cognitive efforts, and being relatively unaffected by argument quality, while relying on peripheral cues such as source credibility and heuristics. While this model is often hailed for its parsimony, flexibility in supporting a wide range of claims, as well as influence in terms of academic citation volumes, it also suffers from shortcomings in terms of practical applicability, predictive ability, and ambiguous relevance to new media environments that challenge the mass-media context from which it historically emerged (Kitchen et al., 2014).

Overall, employment of the ELM in crowdfunding research has shown its relevance to explaining backer contribution intentionality (Liang et al., 2019; Wang and Yang, 2019), as well as in predicting successful outcomes of campaigns (Greiner and Wang, 2010; Li et al., 2016; Zheng et al., 2016). Here, common practice involved defining certain campaign elements as either cues processed through the central or peripheral routes to persuasion, while finding that both have expected impacts in a variety of crowdfunding models.

A more concrete marketing strategy approach was presented by Kraus et al. (2016) in a study of reward-crowdfunding campaigns (RCC). Their results about campaign communication dynamics has led them to suggest a typology of three approaches labelled as – the communicator, the networker, and the self-runner. The communicator is a fundraiser that is rewarded for his/her strong effort in attracting public attention while overseeing a relatively weak project in terms the attractiveness and perceived value of the product/service and the rewards on offer. The networker is gradually building his/her support base offering attractive rewards first to close network of contacts, and gradually expanding to a greater network of support through attentive interaction with the community and resulting modifications to campaign elements. The self-runner is a fundraiser promoting outstanding products/services with a value proposition that easily resonates with prospective backers, leading to rapid and enthusiastic social media reactions, viral spread of campaign information, which may also attract media attention and coverage.

In the remaining of the discussion, we compare these approaches to the TCMF while considering the behavioural trigger underlying each, the paths to influencing it, the factors impacting such paths, as well as their marketing strategy implications. Table 1 summarises this comparison. To avoid repetitive referencing, all claims about the ELM are based on the original papers by Petty and Cacioppo (1986) and Petty et al. (1983), as well as the review on ELM research by Kitchen et al. (2014). Claims about the RCC are based on Kraus et al. (2016). And the claims about the TCMF are based on arguments made in the current paper.

First, the three frameworks differ in what they identify as the primary trigger of prospective backer's reaction to communication. While the TCMF places trust at the centre, as a prime objective of the e-marketing realities, the ELM is primarily concerned with persuasion, as the prime objective of mass-media marketing realities from which it emerged. Here, both assume that these behavioural triggers can be influenced throughout

the campaign period by the proper use of- and modifications to- marketing communication elements. The RCC is not primarily concerned with either trust or persuasion, but rather with their outcomes along the campaign period. In this respect, neither of the models contradict the others, but rather complement them. This is evident in the sense that trust can coexist with-, have impact on-, or result from- persuasion (as in – 'I'm persuaded and trust', 'I trust therefore I am persuaded', or 'I am persuaded to trust'). Furthermore, as these evolve throughout the campaign period, they exhibit certain results that may manifest themselves in campaign dynamics described by the RCC.

Table 1 Summary of comparison between the TCMF, ELM and the RCC

	TCMF	*ELM*	*RCC*
Behavioural trigger	Trust	Persuasion	N/A (implied persuasion)
Paths to achieve behavioural trigger	Calculus trust	Central route	Communication
	Relational trust	Peripheral route	
Influencing factors	Message originator's:	Message receiver's:	Message originator's:
	• Ability	• Ability	• Sales effort required
	• Integrity	• Motivation	• Project value added
	• Benevolence		
Applications in marketing	Quality content provision	Unspecified	Detailed description of the project
	Social media engagement		Personal info about the project owner
			Networking
			Call for action
Marketing strategies	Minimalist	Unspecified	Networker
	Technician		Communicator
	Influencer		Self-runner
	Innovator		
Scope of applicability	All models of fundraising including all models of crowdfunding	All models of communication	Reward-based crowdfunding

Second, while the RCC does not consider differing paths to triggering behaviour and only refers to communication as a generic way to convey information, the TCMF and the ELM present two complimentary paths each. Here, the TCMF argues that overall trust can be achieved by developing both calculus and relational trust, and the ELM suggests that persuasion can follow both a central and peripheral route. Some conceptual proximities may be identified in the sense that both calculus trust and the central route of persuasion assume a careful consideration of information presented, while assessing the quality of arguments, and their cost-benefit implications. Furthermore, both relational trust and the peripheral route of persuasion assume less cognitive effort, the reliance on pre-existing decision heuristics and the credibility of the information source that may be linked to more affective and emotive responses. Nevertheless, conceptual proximity

should not be confused with conceptual equality, as in the cases where relational trust can be a factor in a central route to persuasion, among other cases.

Third, each framework considers several factors as having important impact on the path to triggering behaviour. The ELM considers the communication receiver's ability and motivation to process the information as critical aspects defining the persuasion route to be used. The TCMF considers the communication receiver's perceptions about the communication source's ability, integrity, and benevolence as critical aspects defining the degree of trust attributed to such source. The RCC considers the communication source's investment in sales efforts and the extent to which a communication receiver perceives their offering as valuable to be critical in defining the campaign development dynamics. Hence, unlike the ELM, the TCMF does not distinguish between differing levels of backers' ability and motivation to process information but assumes that they will be able and motivated to process information from a trusted source. In this respect, the ELM does not distinguish between trust levels as influencing persuasion processes either. The RCC and the TCMF are similar in that both suggest that a communication source needs to exhibit their abilities. However, they differ in the sense that the TCMF also requires fundraisers to exhibit integrity and benevolence towards backers, which are not considered in the RCC. Moreover, the TCMF does not consider perceived value-added benefits of fundraiser's offerings, which are acknowledged in the RCC.

Fourth, in terms of marketing applications, while the ELM does not directly address such concerns, both the TCMF and RCC do outline them. The TCMF highlights quality information provision and social media engagement as two critical elements in e-marketing communications, while the RCC suggests four content elements that include detailed description of the project, personal information about the project owner, networking, and call for action. While the essence of the identified elements is similar in both the TCMF and the RCC, the TCMF's elements are more broadly defined, as quality information may include detailed description and personal information about the fundraiser (as suggested by the RCC) but is not limited to these. And, similarly, social media engagements may include networking and call for action (as suggested by the RCC) but are not limited to these either.

Fifth, and as a direct result of the above, different configurations of e-marketing elements identified in both the TCMF and RCC jointly represent aggregate types of marketing strategies. However, while the TCMF strategies are devised as strategic solutions to pre-launch trust conditions, the RCC strategies reflect post hoc descriptions of campaign dynamics based on public reaction. Moreover, while the RCC factors in product and reward attractiveness, these aspects are not considered in the TCMF, under an implied assumption that any product/service can be successfully promoted when employing a relevant marketing strategy towards a relevant market segment. Such approach corresponds with a view that product attractiveness is subjectively evaluated, and that its perceived attractiveness can be influenced by proper segmentation and marketing communication configurations.

Accordingly, the two typologies do not fully correspond with each other. For example, while the RCC communicator seems similar to the TCMF influencer in the sense that both excel at social media engagements, the RCC associates communicators with low attractiveness of products, while the TCMF only considers quality of information about products, but not the quality of products themselves. Similarly, while the RCC self-runner may seem similar to the TCMF minimalist fundraiser, it assumes that the product is the main driver of campaign success, which is not the case in the

TCMF, where a minimalist's campaign success is attributed to pre-existing calculus and relational trust regardless of product attractiveness.

Finally, each of the frameworks has a different scope of relevance. On the one end, the ELM may exhibit the widest relevance across all models of communication, including marketing and crowdfunding, but its generic nature undermines specificities required for practical applicability. On the other hand, the RCC exhibits a relatively narrower scope of relevance to reward crowdfunding, which may be extended to other crowdfunding models in follow up research. Accordingly, the TCMF represents a middle ground of relevance for a wide range of fundraising models including all models of crowdfunding, which may be extended to other e-marketing contexts in follow up research.

In summary, all frameworks provide valuable insights onto paths of triggering prospective backer behaviour. Based on the discussion, we conclude that the TCMF offers greater concreteness and contextualisation when compared to the ELM, and greater theoretical anchoring, cross-model generalisability, as well as campaign strategy diversity when compared to the RCC. As such, it accommodates core principles from each and complements them by shifting focus from persuasion to trust, which may be both a precursor to- and a result of- persuasion, and by suggesting pre-emptive strategic action that may influence campaign dynamics throughout the campaign period. Furthermore, it presents a mid-range framework that is more context specific than the ELM, while suggesting wider applicability across fundraising models than the RCC.

4.1 From theory to practice: big data in service of the TCMF

For the TCMF to be of practical use, one needs to identify concrete methods for assessing its critical elements including trust, the quality of campaign and messaging content, as well as the effectiveness of its social media spread. A promising approach for assessing these elements is the application of big data analytics. Here, while the very definition of big data remains elusive, most researchers refer to it as data that are beyond the business's traditional technical, technological and managerial data processing capabilities (Provost and Fawcett, 2013). The unprecedented availability and richness of data made accessible through social media and the exponentially increasing computing power available to firms, have both led to advances in social media analytics using modelling, sentiment analysis, social network analysis, and text mining techniques (Ghani et al., 2019). These analytical approaches may represent critical dynamic capabilities (Shams and Solima, 2019), which when developed by crowdfunding platforms, may help enhance the effectiveness of campaigning efforts by their fundraisers, and the success of both campaigns and platforms overall.

The embeddedness of crowdfunding practice in online social networks, makes it a fitting context for harvesting critical insight from big data analytics in the service of campaign marketing in general, and trust-based marketing of campaigns in particular. Earlier studies have shown how the use of big data-driven technologies may be used for improving the collection and analysis of business intelligence (Fan et al., 2015), helping configure marketing strategy (Ducange et al., 2018), and enhance customer-centric approaches in marketing (Camilleri, 2020). These studies highlighted the usefulness of big data analytics for the purposes of analysing perception and reputation with regards to brands, products, and the firms offering them; developing advertising, communications, and promotional activities; customer segmentation, profiling, and relationship

management; competitor analysis and positioning; developing pricing strategies; supporting customer-focused product development efforts; and others.

Crowdfunding platforms that may wish to follow the suggested TCMF, should consider big data analytics to support such efforts. Here, building on Ghani et al.'s (2019) characteristics of big data analytics, one can argue that it can be used for descriptive and diagnostic purposes, when identifying pre-launch trust conditions or when measuring reactions to campaign messaging, as well as for prescriptive purposes in recommending effective ways to enhance content quality and/or social spread of campaign information.

First, when assessing pre-launch conditions, platforms may employ data analytics for assessing both the fundraiser and the product or firm they wish to raise funds for. In this context, earlier research has showed how sentiment analysis has been used to assess reputations and perceptions of products and firms (i.e., Mishra and Sharma, 2019; Vidya et al., 2015). However, in the case of crowdfunding, both fundraiser and brand may be less familiar to the general public, and hence requiring a more nuanced approach. While assessing trust in the concept may draw on sentiment analysis with respect to similar or alternative products, rather than the specific concept being fundraised, assessing trust in the fundraiser may require a different approach.

For assessing trust in fundraiser, one may consider using the approach developed by Roy et al. (2017). Their work outlines the development and empirical testing of a social media analytics algorithm for systematically measuring individual actors' trust levels in a social network. These measures include scores for both 'trustingness' and 'trustworthiness'. Trustingness was defined as an actor's propensity to trust others in the network. Trustworthiness was defined as the extent to which an actor is viewed by others in the network as trustworthy. The two concepts are mutually interdependent, as the trustingness of an actor is dependent on the trustworthiness of its neighbours and vice versa. Accordingly, when calculating the trust scores of social network users, the authors factor both the quantity of incoming links and the quality of the sources of incoming links. Further strengthening their measures, they also factor the risks and losses that are associated with wrong decisions made during network engagement, which may vary in different networks (labelled as 'network trusting-decision involvement').

Second, once insights into prevailing trust in both fundraiser and concept can be evaluated and assessed, the applicability of different marketing strategies may follow. Analytics examining pass-on behaviour of messages in social networks can help identify triggers of social spread (Ketelaar et al., 2016) and, hence, support campaign messaging, formulation, and calls for action. Furthermore, Chi et al. (2015) highlight a series of content analyses reports which can generate word clouds (reflecting frequency and salience of terms used in related communications), topic analysis (distribution of conversations on specific topics according to set parameters), topic trend (temporal tendency with respect to themes of interest), influence viewer (identification of influential channels and users), river of news and share of conversation (list of discussions and share of certain themes out of total discussions). These together with analyst reviews can provide valuable insights into the quality of different campaign content elements, as well as generate recommendations for improvements based on existing content performance.

In this context, it is worth highlighting that while big data analytics may serve as a valuable source for relevant assessments and their resulting marketing strategies, it should be employed ethically while avoiding infringement on privacy and misuse of information harvested (Nair, 2020). Specifically, in the case of the TCMF, sensitive information about relationships and trustworthiness of individuals is assessed and needs

to be developed with necessary sensitivities. And similarly, resulting recommendations for enhancement of social spread and content updates need to follow ethical guidelines, so as to avoid harm to individuals or groups that may be affected by them. Some examples of relevant pitfalls and remedies are presented in Shneor and Torjesen (2020), and may include situations where content recommendations may represent misinformation, or that social spread enhancers may verge on bullying and abuse.

In conclusion, while the above does not represent a comprehensive overview of all available techniques and approaches, it does present a compelling argument for the possibilities of using big data analytics as a practical approach, when following the TCMF. This is achieved by highlighting concrete analytic techniques and approaches that, when used ethically, can aid crowdfunding platforms in both assessing pre-launch trust conditions for each campaign, as well as a dynamic feedback channel for constant improvement of campaign content quality, and effectiveness of social media spread of campaign messaging.

5 Conclusions

The current paper has aimed at answering what fundraisers can do to enhance the trust of prospective backers and how they may achieve this under different pre-launch trust conditions. Building on earlier research from both e-marketing and crowdfunding, we engage in conceptual integration that culminates in a suggested TCMF. This framework accommodates both the needs of winning backers' trust to see campaigns succeed (Chen et al., 2014; Kang et al., 2016; Zhao and Vinig, 2019), as well as the fact that fundraisers enter the crowdfunding process with different pre-launch trust conditions. Accordingly, we suggest a list of propositions outlining which strategy is more likely to succeed under different initial trust condition. The guiding logic of these propositions is the extent to which a strategy addresses relevant trust gaps as well as leverages relevant trust surpluses at the time of campaign launch. Translating these theoretical notions into practice, we conclude by suggesting big data analytics as an approach that can help both assessing pre-launch trust conditions, as well as the quality of campaign content, and the effectiveness of its messaging via social media.

In this respect, our study contributes to earlier literature in developing a framework that is anchored specifically in the realities of crowdfunding practice, while being able to inform prospective fundraisers about the marketing efforts they should invest in when aiming to enhance prospective backers' trust. As such, it goes beyond common practice in earlier research that has focused on identifying associations between specific campaign elements and success (Kaartemo, 2017; Shneor and Vik, 2020), and proposes an integrated approach accommodating these insights into a more widely applicable framework anchored in trust theory. Furthermore, unlike earlier research, the current work does not ignore the fact that fundraisers enter the crowdfunding process under different pre-launch trust conditions, and hence requiring different marketing strategies for enhancing backer trust. Moreover, by comparing the TCMF to other relevant frameworks, we exhibit its relative value added arguing that it offers greater concreteness and contextualisation when compared to the ELM, and greater theoretical anchoring, cross-model generalisability, as well as campaign strategy diversity when compared to the RCC. Finally, we do not keep our suggestions at the theoretical level, and also review

a practical approach for following the TCMF by employing big data analytics at various stages.

5.1 Implications for future research

While the current study presents interesting contributions, it also has some limitations that need to be acknowledged. Such limitations can also translate into fruitful directions for future research. First, as our work is conceptual in nature, and despite it being built on an integration of empirical evidence from earlier studies, the suggested framework should also be subjected to empirical testing. In this respect, future researchers are encouraged to test the theory in different crowdfunding models, as well as national contexts, which may vary by social trust levels (Delhey and Newton, 2005), as well as industry maturity levels (Ziegler et al., 2020).

Second, from a theoretical point of view, our work is based on the hypothesis that trust is enhanced through marketing activities. However, others may wish to investigate the boundaries of such positive effects. For example, it is unclear at what point does quality information become 'too corporate' or 'too professional' raising doubts among prospective backers about the actual financial needs of a fundraiser; at what point does quality information become information overload; or at what point does social media engagement become 'unpleasant' or even a 'harassment' for prospective backers. Accordingly, research into what constitute too much, or too little, marketing effort can further enhance our understanding and improve the quality of our advice for practitioners.

Third, researchers may also seek to validate the value of big data analytics in informing the practical use of the TCMF. Such research may either confirm the TCMF through analyses of trust, content quality, and social spread using big data analytical techniques; or examine which big data analytical techniques are best at predicting pre-launch trust, as well as the effectiveness of the suggested marketing approaches that emerged from such assessments.

5.2 Implications for practice

The main implication for practice is that the TCMF encourages future crowdfunding fundraisers to engage in an assessment of the trust conditions prevailing between them and their prospective backers as part of their campaign planning before its launch. Based on such insights, fundraisers can better allocate resources between investments in developing quality content and/or social media engagement in their campaign design and marketing program. Such approach is expected to help fundraisers both overcome trust deficits, as well as leverage trust surpluses when promoting the campaigns to backers in a more effective and cost-efficient way.

Furthermore, such understanding can also inform advice provided by platforms in their training or customer support services to prospective fundraisers. While the depth and breadth of customer support varies widely between platforms, the suggested framework serves as a support tool that can be communicated to fundraisers or even incorporated into campaign design tools on the platforms' interfaces. In the latter case, fundraisers may be probed about their assessment of various facets of pre-launch trust conditions that can automatically generate recommendations drawing attention to relevant elements in the campaign design.

Alternatively, committed platforms may seek to develop in-house data analytics capacities that may assess pre-launch trust conditions, and hence informing marketing strategy recommendations for their would-be fundraising customers, as well as provide them with real-time insights into the quality of their campaign's content and the effectiveness of their messaging via social media. Such services can come at a premium, and may also represent additional revenue streams for otherwise, cash-strapped platforms operating on small success-based commissions. Regardless of the commercial value developed through such applications of big data analytics, platforms should ensure ethical practice when collecting, analysing, and interpreting insights into recommendations, while avoiding infringement on individual privacy or misuse of information (Nair, 2020).

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