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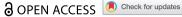
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"In this together": on the antecedents and implications of crowdfunding community identification and trust

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ABSTRACT

Despite references to crowdfunding as a community-embedded phenomenon, few studies explore the antecedents and implications of crowdfunding communities. This study suggests community identification and trust as two core aspects of crowdfunding communities, while aiming to identify their antecedents and implications for crowdfunding campaign information-sharing intentions and behavior. Information-sharing is a necessary condition for successful entrepreneurial fundraising when using crowdfunding. For this purpose, we use survey data collected from users of Finland's leading reward crowdfunding website, Mesenaatti.me, while analyzing it using structural equation modelling. Our findings show that community identification and trust are both positively associated with crowdfunding contribution attitudes and with information-sharing intentions. However, only community identification is associated with information-sharing behaviors. Enjoyment, homophily, and community outcome expectations are antecedents of both community identification and trust. Tie strength and normative pressures are antecedents of community identification. Finally, information-sharing intentions mediate the effect of community trust on information-sharing behavior. We discuss explanations for these findings and their implications for crowdfunding research and practice.

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Crowdfunding; community; information-sharing; identification; trust

1. Introduction

Crowdfunding is the pooling of contributions from multiple backers via the Internet often without the involvement of traditional financial intermediaries (Mollick 2014). Such mechanism underlies a family of different models including both investment and noninvestment fundraising, depending on the benefits backers are offered for their contributions (Belleflamme and Lambert 2016). Investment models are mostly associated with equity investments and lending, while the non-investment models are associated with pre-purchase of rewards and the provision of donations.

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One defining aspect common across these models is the embeddedness of crowd-funding-related exchanges between members of an online community. Owston (1998) defined an online community as a group of people that regularly interact online while sharing common goals, ideas, and values (For detailed review see: Hammond 2017). In the context of crowdfunding, community members share the goal of helping peers in their fundraising efforts, share ideas about related opportunities, and promote values of financial democracy (Hassna 2022). Hence, crowdfunding was suggested to incorporate community-based experiences that generate community benefits for contributors (Belleflamme, Lambert, and Schwienbacher 2014). Specifically, crowdfunding was viewed as a context for community-based resource mobilization (Murray, Kotha, and Fisher 2020), a platform for collective action (Gleasure and Feller 2018), as well as a combination of both (González-Cacheda and Outeda 2021).

Accordingly, the literature is rich with references to the notion of a "Crowdfunding Community", as driven by a community spirit that attracts both backers and fundraisers into crowdfunding (Maehle 2020). Such communities are built around shared goals, ideologies, enthusiasm for, and interest in funding activities (Hassna 2022). Here, while some studies associate the term with communities aggregating supporters around a specific common cause (e.g., Gleasure and Morgan 2018; Monik and Parzuchowski 2024; Murray, Kotha, and Fisher 2020), others refer to it as the population of backers of different campaigns on a specific platform (e.g., Colombo, Franzoni, and Rossi-Lamastra 2015; Ryu and Suh 2021; Thies, Wessel, and Benlian 2018; H. Zheng et al. 2014), essentially equating active platform users with members of a crowdfunding community. Only one study bridges the two while referring to sub-groups of funding communities, which are built under the roof of one platform but still revolve around shared interests in specific activities (Hassna 2022).

Nevertheless, as specific campaigns often represent temporary relationships, platforms' sustainability depends on their ability to retain backers by supporting their participation in a thriving community that is engaged in multiple activities involving multiple campaigns (Ryu and Suh 2021). In this respect, a recent literature review found consistent evidence for a positive effect of social capital developed within the crowdfunding community (i.e., internal social capital) on crowdfunding contribution behavior and that this effect increases over time (Cai, Polzin, and Stam 2021). Research specifically examining community-related aspects in crowdfunding has suggested that they serve as both triggers to contribution, as in the case of community identification (Gunawan et al. 2019; Monik and Parzuchowski 2024; Rodriguez-Ricardo, Sicilia, and López 2018) or self-image congruence (Ryu and Suh 2021), and as the reward for contributions made, as in the case of achieving a sense of community belonging (Bao and Huang 2017; Colombo, Franzoni, and Rossi-Lamastra 2015).

The two main forms of support provided by members of the crowdfunding community include direct financial contribution and/or information-sharing about the campaign. The latter is spread via social networks for the purpose of helping the campaign reach a wider scale of potential supporters (Shneor and Munim 2019). While the importance of the financial contribution is self-evident and intuitive, the importance of information-sharing has been established by evidence in studies confirming strong positive effects of both the scale and scope of campaign information-sharing and campaigns' outcomes (Bi, Liu, and Usman 2017; Borst, Moser, and Ferguson 2017; Hobbs, Grigore, and Molesworth 2016;

Kleinert and Volkmann 2019; Shneor, Mrzygłód, et al. 2021). Such findings help highlight the integral part played by information-sharing in crowdfunding practice, as the possibility to raise small sums from a large base of supporters depends on the ability to reach and convince them to engage through persuasive communication.

Building on earlier research highlighting the importance of community identification (Casaló, Flavián, and Guinalíu 2010a; Sanz-Blas, Buzova, and Pérez-Ruiz 2021; C. Shen and Chiou 2009) and trust (C. Hsu, Chiang, and Huang 2012; Tsai and Hung 2019; Yeh and Choi 2011) for successful functioning of different types of online communities, the current study examines these core aspects of community in the context of reward crowdfunding. Accordingly, we seek to answer two related questions. First, what is the effect of community identification and trust on contribution attitudes broadly, and information-sharing intentions and behaviors more specifically? And second, we seek to identify what are the antecedents of community identification and trust?

For this purpose, we first provide contextualized definitions for our core concepts. Crowdfunding Community Identification (hereafter "CCI") is defined as the sense where people come to view themselves as a member of the crowdfunding community and feel emotionally connected with its members. This definition builds on and adjusts an earlier definition by Hsu et al. (2012) for online community identification. Crowdfunding Community Trust (hereafter "CCT") is defined as the degree to which an individual believes that those within his or her selected crowdfunding community are reliable and are trustworthy with information and resources shared within the community. This definition builds on and adjusts an earlier definition by Posey et al. (2010) for online community trust.

Next, we analyze survey data collected from 556 registered users on Finland's leading reward crowdfunding platform – Messenatti.me. For this purpose, we employ structural equation modelling and conduct a series of quality tests alleviating concerns with various biases, which are then followed by a report of our findings.

Overall, we present several interesting findings. First, we show that enjoyment, homophily, and community outcome expectations all serve as antecedents of both CCI and CCT. Second, we show that perceived tie strength and normative community pressures serve as antecedents of CCI, but not of CCT. Third, we show that both CCI and CCT are positively associated with attitudes towards contribution. Fourth, both CCI and CCT are positively associated with information-sharing intentions. Fifth, the effect of CCT on informationsharing intentions is fully mediated by attitudes towards contribution. Sixth, the effect of CCI on information-sharing intentions is partially mediated by attitudes towards contribution. Finally, we show that CCI is both directly and indirectly associated with informationsharing behavior, with the latter partially mediated by information-sharing intentions.

Accordingly, our study offers several contributions. First, and most importantly, it suggests and validates a novel integrative model accommodating both the antecedents and outcomes of community identification and trust in the context of reward crowdfunding. Second, it shows that CCI and CCT are important antecedents of attitudes towards contribution, information-sharing intentions, and information-sharing behavior. Finally, it further solidifies our understanding and extends the generalizability of the importance of CCI and CCT for the functioning of crowdfunding communities.

In the remainder of the paper, we first present a literature review highlighting the different theoretical approaches taken in understanding crowdfunding backer intentionality and behavior, while arguing for the need to introduce community dimensions into such efforts. Accordingly, a list of hypotheses is developed with respect to a series of outcomes and antecedents of community identification and trust. Next, we outline our methodological choices and analytical procedures. This is followed by a summary of findings, and their discussion vis-à-vis earlier research. Finally, we conclude by highlighting the study's contributions, limitations, as well as implications for research, theory, and practice.

2. Literature review

As crowdfunding practice spreads wider, the interest in better understanding backer behavior in crowdfunding also grows. Accordingly, various researchers have suggested different explanations as to what influences backer intentionality and behavior, while drawing on a wide range of theories.

One group of studies employs signaling theory, viewing it as a mechanism for limiting information asymmetry between backers and fundraisers (e.g., Cappa et al. 2021; Kleinert, Volkmann, and Grünhagen 2020; Nitani, Riding, and He 2019; Steigenberger and Wilhelm 2018), as well as achieving legitimacy (Frydrych et al. 2014). Such studies identify various campaign elements as signal carriers and examine their effects on campaign performance as successful cues for convincing backers.

A second group builds on trust theory as a mechanism for unlocking resources in the community by examining campaign features, user interaction patterns, and community dynamics that enhance trusting relations (e.g., Alharbey and Van Hemmen 2021; D. Chen, Lai, and Lin 2014; Kang et al. 2016; Liang, Wu, and Huang 2019). These studies examined the effects of different types of trust (mostly calculative and affective), as well as the effects of the degree of trust towards different objects (e.g., platform, campaign, campaign creator).

Finally, a third group draws on social psychology by employing the theory of planned behavior, highlighting the cognitive antecedents underlying backer intentionality and behavior (e.g., Baber 2022; Y. Chen et al. 2019; Shneor and Munim 2019; Shneor, Munim, et al. 2021). Such studies exhibit the effect of favorable attitudes and social norms, and to a lesser extent that of self-efficacy and perceived behavioral control in influencing intentions towards campaign support, as well as their resulting behaviors.

While notions of community are indirectly implied in earlier studies, they are often camouflaged by other concepts. For example, interactions among crowdfunding community members (e.g., financial contribution, information-sharing, commentary and feedback, knowledge exchanges, etc.) may serve as signals reducing information asymmetries and hence as mechanisms enhancing trustworthiness of campaigns, fundraisers, and platforms. Intuitively, such trust enhancement and information asymmetry reduction can help shape favorable attitudes, which are required for the development of related intentions and behaviors.

Accordingly, we argue that understanding crowdfunding intentionality and behavior can benefit from tighter contextualization in crowdfunding realities, as embedded in and dependent on its community of supporters (Belleflamme, Lambert, and Schwienbacher 2014; Cai, Polzin, and Stam 2021; Colombo, Franzoni, and Rossi-Lamastra 2015). While all theories hold merit in providing valid explanations for supporting intentions and

behaviors, one may still suggest explanations that can either serve as a common thread passing across them or complement them with additional insights. Hence, we suggest that a community approach is warranted and can help address related challenges. By following such approach, we are answering a call for more research into the cognitive features of crowdfunding contribution and the context in which relevant decisions are made (Hoegen, Steininger, and Veit 2017).

2.1. Community in crowdfunding

Earlier research at the intersection of crowdfunding and community-related aspects is limited. A study by Hassna (2022) introduced crowdfunding communities as online funding communities that are built around shared goals, ideologies, enthusiasm for, or interests in specific funding activities. Several studies investigated how entrepreneurs use crowdfunding for community-based resource mobilization, finding that they engage in community building prior to a campaign's launch, community engaging during the campaign, and community spanning after achieving their funding goals (Hui, Greenberg, and Gerber 2014; Murray, Kotha, and Fisher 2020). Here, some showed that congruence between the crowdfunding campaign and targeted funding groups is associated with higher fundraising success rates (Hassna 2022). Others analyzed campaigns of offline community projects while highlighting the importance of mobilizing offline community members into online fundraising supporters (Gooch et al. 2020; Josefy et al. 2017). However, these studies focused on the campaign and the fundraiser, while not considering the perspective of the backer and their views of the crowdfunding community.

The little research that did address community aspects from the backer's perspective viewed them as either triggers to contribution, as in the case of community identification (Gunawan et al. 2019; Monik and Parzuchowski 2024; Rodriguez-Ricardo, Sicilia, and López 2018) and self-image congruence (Ryu and Suh 2021), or as rewards for contributions made, as in achieving a sense of community belonging (Bao and Huang 2017; Colombo, Franzoni, and Rossi-Lamastra 2015). In addition, some also showed that trust in the crowdfunding platform, which may incorporate trust in its community of users, was positively associated with funding intentions (Alharbey and Van Hemmen 2021; Baber and Fanea-Ivanovici 2021).

In the current study we delve deeper into understanding the notion of community in crowdfunding by bringing it to front and center. We do so by examining backers' perceptions of CCI and CCT and their associations with contribution attitudes, information-sharing intentions, and behaviors. A focus on these specific aspects is important for several reasons. First, the two complement each other in the sense that identification captures one's perceived place in the community (C. Hsu, Chiang, and Huang 2012) and trust captures one's perceptions of other members of the community (Posey et al. 2010). Second, while identification implies affective and emotional connection (C. Hsu, Chiang, and Huang 2012), trust may imply both calculative as well as affective connection (Kang et al. 2016). Finally, the two represent different mechanisms for overcoming risks associated with online transactions between individuals who may not always know each other, and where community identification lubricates engagement through a sense of shared interests (A. X. L. Shen et al. 2011), while community trust lubricates engagement through a sense of shared protection and security (Pavlou, Liang, and Xue 2007).

Finally, since information-sharing has been widely acknowledged as essential for successful functioning of online communities in general (Boon, Pitt, and Salehi-Sangari 2015; De Valck et al. 2007; Y. Zheng, Zhao, and Stylianou 2013), and for crowdfunding campaigns' success in particular (Bi, Liu, and Usman 2017; Borst, Moser, and Ferguson 2017; Hobbs, Grigore, and Molesworth 2016; Kleinert and Volkmann 2019; Shneor, Mrzygłód, et al. 2021), we focus on this specific manifestation of community engagement in our study. Information-sharing particular attractiveness is linked to its representation of a low threshold for community members' engagement, independence from availability of financial means, and its close association with supporters' financial contribution intentions and behavior (Shneor and Munim 2019).

2.2. Outcomes of community identification

In their seminal paper on social capital, Nahapiet and Ghoshal (1998) argued that identification serves as a resource enhancing the motivation to combine and exchange knowledge in social groups. That is, if an individual identifies with the group they will be motivated to participate in its activities and help its members, as such actions will be congruent with their own personal values (Bhattacharya and Sen 2003).

Here, earlier research has shown that community identification was positively associated with community engagement in brand communities (Algesheimer, Dholakia, and Herrmann 2005), as well as with repurchase intentions through the mediating effects of helping other community members (Mandl and Hogreve 2020). Furthermore, several studies have shown that virtual community identification was positively associated with community participation and community promotion as when sharing information about or from the community (Casaló, Flavián, and Guinalíu 2010b; Sanz-Blas, Buzova, and Pérez-Ruiz 2021). Others found that community identification was positively associated with the quantity of information shared by the community members (Chiu, Hsu, and Wang 2006). Specifically, during the funding period of a crowdfunding campaign, fundraisers use linguistic devices to evoke a feeling of group cohesion and identity with the crowdfunding community (Dorfleitner, Hornuf, and Weber 2018) and this positively influences backers' intentions to participate in crowdfunding community activities (Gunawan et al. 2019; Rodriguez-Ricardo, Sicilia, and López 2018). Hence, we hypothesize the following:

H1: One's CCI positively influences his/her (a) attitude towards contribution; (b) campaign information-sharing intentions; and (c) campaign information-sharing behaviors.

Other studies showed that community identification influences intentions to participate in the community both directly and indirectly, with the latter effect being mediated by attitudes and subjective norms (Casaló, Flavián, and Guinalíu 2010a). In this context, a study of users in blog communities found that community identification is associated with favorable attitudes towards using blog communities, and that such positive attitudes are themselves associated with intentions to remain with such communities (C. Shen and Chiou 2009). Overall, attitudes represent a subjective assessment of the desirability of potential outcomes from acting upon a behavior (Ajzen 1991). When brought into the context of crowdfunding, CCI will lead to viewing contributions as a beneficial outcome

for the community, which is congruent with desired outcomes for the community's members, and hence lead them to develop favorable attitudes towards such contribution. In return, and as suggested by the theory of planned behavior (Aizen 1991), individuals will exhibit greater intentions to act on a behavior, when holding favorable attitudes towards it. Positive and consistent associations between attitudes and intentions, as well as between intentions and behavior, are well documented in research in a wide range of contexts (Conner and Armitage 2006), including crowdfunding contribution (e.g., Baber 2022; Y. Chen et al. 2019; Shneor and Munim 2019; Shneor, Munim, et al. 2021). Accordingly, we hypothesize that:

H2: One's attitude towards contribution will mediate the effect of his/her CCI level on his/ her campaign information-sharing intentions.

H3: One's information-sharing intentions will mediate the influence of his/her CCI on his/ her campaign information-sharing behaviors.

2.3. Outcomes of community trust

Trust is widely recognized as a critical enabler of online exchanges in general (Corritore, Kracher, and Wiedenbeck 2003; Kim and Peterson 2017) and crowdfunding in particular (Baah-Peprah and Shneor 2022). This is mostly due to its role in mitigating uncertainties under conditions of information asymmetries, as often prevalent in online marketplaces (Pavlou, Liang, and Xue 2007). Under such conditions, individuals accept a degree of vulnerability in their interaction with others, when perceiving them to be capable, benevolent, and acting with integrity (S. C. Chen and Dhillon 2003). Notably, research has shown that interpersonal trust has a positive effect on knowledge sharing, while uncertainty has a negative effect (M.-H. Hsu and Chang 2014). Furthermore, in contexts such as virtual communities, trust in the community enhances individuals' engagement with the community, and especially in terms of information-sharing with its members (Chughtai and Buckley 2008; Nov 2009).

A meta-analysis of online trust in e-commerce has shown that it was positively associated with six consequences including purchase intention, satisfaction, loyalty, intentions to use a website, and repeat purchase intentions (Kim and Peterson 2017). Studies examining trust in online communities showed a positive association between trust and engagement (C. Hsu, Chiang, and Huang 2012). Moreover, a study distinguishing between affective and cognitive trust (Yeh and Choi 2011) found that cognitive trust was positively associated with giving, seeking, and passing information to others outside the community, while affective trust was associated with information giving and passing to others outside the community, but not seeking information outside the community. Moreover, some also found that the effect of cognitive trust on usage intentions is mediated by affective trust (Tsai and Hung 2019).

Studies on crowdfunding find significant associations with trust in platform and fundraiser, but haven't considered trust in the community per se. Kang et al. (2016) survey of Chinese equity and reward crowdfunding backers showed that both relational and calculus-based trust were positively associated with willingness to invest. Liang et al. (2019) found that data collected from Chinese experiment participants showed a positive association between trust in fundraiser and investment intentions. Chen et al. (2019) survey in China found that trust was positively associated with intention to devote time and money for donation crowdfunding campaigns. Alharbey and Van Hemmen (2021) study of Saudi equity crowdfunding investors found that both trust in platform and trust in the fundraiser were positively associated with investment intentions, and that platform trust enhanced trust in the fundraiser. Furthermore, Baber and Fanea-Ivanovici (2021) study of a mixed sample of European and Asian respondents found positive association between perceived trust and intentions to participate in crowdfunding projects.

Taking a step further, we argue for the importance of trust towards the crowdfunding community and its members beyond that towards the technical operator (i.e., platform) or a specific fundraiser. Hence, we draw on the evidence presented above for both direct and indirect effects of trust in studies conducted in online communities and apply them in the context of a crowdfunding community. Accordingly, we hypothesize the following:

H4: One's CCT will positively influence his/her (a) attitude towards contribution; (b) campaign information-sharing intentions; and (c) campaign information-sharing behaviors.

Generally, one does not expect to be hurt by doing something for someone he or she trusts. Hence, higher levels of trust are likely to be associated with expectations of favorable rather than negative outcomes from a behavior directed at someone who is trusted. Again, since attitude captures an assessment of how favorable likely outcomes from a behavior may be, behaviors involving trusted entities are more likely to be regarded favorably. Earlier research has shown that attitudes mediate the effect between trust towards sources of word-of-mouth, and the intention to follow it (Zainal, Harun, and Lily 2017). Others found that attitudes mediate the effect between trust in travel e-commerce websites and consumer intentions to use them for related purchases (Sadiq et al. 2022). Accordingly, when brought into the context of crowdfunding, CCT will lead to viewing contributions as beneficial to both to the community and to oneself. Hence, individuals trusting the community will exhibit greater intentions to contribute to its members, as doing so will be expected to result in positive outcomes. Furthermore, as in line with the strongly validated assumptions of theory of planned behavior (Ajzen 1991; Conner and Armitage 2006), higher contributions intentions will eventually lead to greater degrees of contribution behavior. Accordingly, we hypothesize that:

H5: One's attitude towards contribution will mediate the influence of his/her CCT on his/ her campaign information-sharing intentions.

H6: One's campaign information-sharing intentions will mediate the influence of his/her CCT on his/her campaign information-sharing behaviors.

Furthermore, earlier studies also identified relations between community identification and trust. Here, Hsu et al. (2012) showed that community identification was positively associated with community trust, which was then positively associated with community engagement intentions, suggesting a partial mediation effect for community trust. Yeh and Choi (2011) showed that community identification was positively associated with both cognitive and affective trust, which then affected information giving and passing intentions, again suggesting a mediation effect for trust. And Hsu et al. (2014)'s study of users of an online group auction website showed that identification was positively associated with trust in group members, which was then positively associated with attitudes towards online shopping.

While existing crowdfunding research did not previously examine these relations, we bring these insights into the crowdfunding context, while hypothesizing the following:

H7: One's CCI will positively influence his/her CCT.

H8: One's CCT mediates the influence of CCI on his/her (a) attitude towards contribution; (b) campaign information-sharing intentions; and (c) campaign information-sharing behavior.

2.4. Antecedents of community identification and trust

2.4.1. Tie strenath

Classical network theory (Granovetter 1983) suggests that tie strength reflects the amount of time, the levels of emotional intensity and intimacy (mutual confiding), and the reciprocal relations that characterize the tie. Earlier research in virtual communities showed that both reciprocal relations and relational strength enhance affective commitment to the community (Luo et al. 2021). More specific to identification, Bhattacharya and Sen (2003) suggested that frequent participation in group activities and interaction with other members enhances identification with the group. Similarly, Pai and Tsai (2011) showed positive association between community participation and community identification in their study of a virtual community.

When considering trust, a study of social networking sites by Bapna et al. (2017) argued that a larger number of strong ties increases the likelihood of observing higher levels of trust within a population. Furthermore, an earlier study of social capital in knowledge exchanges (Levin and Cross 2004), showed that strong ties were positively associated with competence and benevolence-based trust. And stronger ties were found to trigger a community site's perceived trustworthiness (Brown, Broderick, and Lee 2007). Hence, overall, one can argue that stronger ties reduce perceived risks and enhances credibility, both reflecting important antecedents of online trust more broadly (Corritore, Kracher, and Wiedenbeck 2003). Building on these findings and their underlying logic, we hypothesize the following:

H9: One's tie strength with other crowdfunding community members will positively influence his/her (a) CCI; and (b) CCT.

2.4.2. Enjoyment

Perceived enjoyment represents the extent to which the activity of using a technology is perceived to be personally enjoyable in its own right, and beyond any instrumental value it may have for the user (Davis, Bagozzi, and Warshaw 1992). Various studies have shown that participation in online communities is influenced by hedonic motives, such as enjoyment (Lou et al. 2013; Yoo and Gretzel 2008). Such studies view community members as pleasure seekers, who achieve a sense of enjoyment from exchanges with fellow members of the community. When studying online travel communities, Wang and Fesenmaier (2004) argued that while being helpful towards others may be derived from self-satisfaction in the action itself, it also transforms adhering to community norms, as well as exhibiting community commitment and affinity. In a different study of users of a virtual community, Sanz-Blas et al. (2021) have identified play as one dimension of structural embeddedness that is positively associated with community-self connection. Similarly, a study by Chang et al. (2020) showed that both enjoyment in helping and hedonic motivation (fun) enhance community identification.

With respect to trust, research has shown that enjoying the use of certain online services enhances the trust in them. This was found in the cases of online payments (Rouibah, Lowry, and Hwang 2016), e-commerce websites (Yuliana and Wahyudi 2021), and mobile wallets (To and Trinh 2021). Specifically, an earlier study surveying American students about e-commerce experiences, found that the affective aspect of enjoyment was significantly associated with the integrity and ability dimensions of trust in the website (Hwang and Kim 2007). These authors claimed that enjoyment represented an affective influence on assessments of perceived quality and risks, both relating to the integrity dimension of trust, and on the senses of self-efficacy and control as relating to the ability dimension of trust. Since crowdfunding is also a community, where members help each other through sharing of information and resources via online service providers, we hypothesize the following:

H10: One's enjoyment of crowdfunding will enhance his/her (a) CCI; and (b) CCT.

2.4.3. Homophily

Homophily reflects situations where individuals, who interact with one another, are highly similar along certain attributes, which smoothens communication and results in more frequent information exchanges among them (Rogers and Bhowmik 1970). According to Algesheimer et al. (2005), the cognitive aspect of community identification involves emphasizing the perceived similarities with other community members and dissimilarities with non-members. Hence, greater degrees of homophily may strengthen the sense of affinity with members of the community.

With respect to trust, one can again argue that homophily reduces perceived risks and enhances perceptions of credibility, as important antecedents of online trust more broadly (Corritore, Kracher, and Wiedenbeck 2003). Unsurprisingly, greater homophily was found to trigger a community site's perceived trustworthiness (Brown, Broderick, and Lee 2007). Recently, Leonhardt et al. (2020) found that perceived homophily enhances consumers' trust and, in turn, their reliance on user-generated product information which is shared via social media. Cho et al. (2020) showed that homophily was positively associated with trust in community members of an online sharing economy community. More specifically, crowdfunding research found that homophily triggers herding behavior among community members (Petit and Wirtz 2021), and that an activist variant of homophily is responsible for disproportional compensatory reactions in funding of women by women (Greenberg and Mollick 2014). Nevertheless, such insights do not account for community identification or trust, as potential carriers of such effects. Applying the above insights into the context of a crowdfunding community, we hypothesize the following:

H11: One's homophily with other crowdfunding community members will positively influence his/her (a) CCI; and (b) CCT.

2.4.4. Community outcome expectations

Outcome expectations are the expected consequences of one's own behavior, where positive expectations serve as incentives encouraging certain behaviors (Bandura 1997). Community-related outcome expectations are individual judgment of likely consequences of their knowledge-sharing behavior in a virtual community (Chiu, Hsu, and Wang 2006). Earlier research showed that knowledge sharing in virtual communities is primarily motivated by community interest and moral obligation rather than by pure selfinterest (Wasko and Faraj 2000). Such concerns are consistent with the affective commitment component of community identification, where individuals feel committed to the well-being of their peer group members (Algesheimer, Dholakia, and Herrmann 2005). Furthermore, incentives aligned with ensuring commitment to the well-being of the community enhance the trustworthiness of the community itself as a self-enhancing collective unit. Accordingly, if the outcomes of information-sharing in the community are regarded as incentives that add value to the community as a whole, it will trigger the affective commitment of its members to act in ways that ensure the group's well-being and further enhance the trust in such self-improving collective. Applying this line of argumentation to crowdfunding communities, we hypothesize the following:

H12: One's outcome expectations of the crowdfunding community will positively influence his/her (a) CCI; and (b) CCT.

2.4.5. Normative community pressure

Group norms are often referred to in online community research as the agreement among members about their shared goals and expectations (A. X. L. Shen et al. 2011; Zhou 2011). When users feel that their goals and values are consistent with those of other community members, they exhibit higher degrees of desire for engagement (A. X. L. Shen et al. 2011) and participation intentions (Zhou 2011). Such normative commitment positively affects knowledge sharing intentions in virtual communities (Luo et al. 2021).

However, when adherence to community norms is experienced as pressure, members may view the association and participation in the community as burdensome while weakening participation intentions in brand communities (Algesheimer, Dholakia, and Herrmann 2005), as well as in social networking sites (2009). Furthermore, normative pressures were also negatively associated with attitudes towards participation in blogging communities (C. Shen and Chiou 2009). In the context of a crowdfunding community, Shneor and Munim (2019) found that perceived behavioral control was negatively associated with information-sharing intentions, which was interpreted as resistance to social pressure. Accordingly, since normative pressures may represent less pleasant and burdensome experiences, they are likely to have negative effects on community identification and trust. And when



applied onto information-sharing in a crowdfunding community, we hypothesize the following:

H13: Normative community pressure will negatively influence one's (a) CCI; and (b) CCT.

In summary, Figure 1 graphically presents the model of our hypothesized relations.

3. Methods

3.1. Study context and data collection

We collected data from users registered on the Finnish reward crowdfunding platform Mesenaatti.me. Finland was an early crowdfunding market adopter, ranking eighth and seventh in alternative finance volumes per capita globally with USD 68.7 million and 70.42 million in 2018 and 2020, respectively; and it was also early to implement friendly crowdfunding regulations (with a Crowdfunding Act already passed in parliament in 2016) (Ziegler et al. 2020). It also had the largest crowdfunding volumes in the Scandinavian region, accounting for 46% of Nordic crowdfunding volume growth in 2020 (Ziegler et al. 2020).

Mesenaatti.me is Finland's largest reward crowdfunding platform. It was established in 2013 and has overseen fundraising of over EUR 3 million in the first four years of operation. The survey was distributed by the platform management to its 25,000 registered users. The first invitation was followed up by four reminders. The survey included a long list of questions and items, and for boosting participation, respondents were offered the possibility to participate in a lottery of gift cards. The survey was conducted following the review, approval, and supervision of the Norwegian national research data center's data protection unit.

After removing entries with missing data and those suspected of monotonous response bias, we were left with 556 responses, representing a 2.2% response rate. Such sample size meets the requirements for multivariate data analysis, as according to Hair et al. (2010). Overall, the sample was gender balanced with 49.5% male and 50.5% female respondents. It also incorporated backers that contributed different amounts, with 25% contributing € 0–30, 27% contributing € 31–60, 25% contributing € 61–150, and 23% contributing more than € 150.

3.2. Non-response bias

We follow the wave analysis (Armstrong and Overton 1977) for checking non-response bias, while splitting our sample into the first and last 278 respondents. Table 1 shows the significance of differences between the two waves of responses along demographic variables. Accordingly, we do not find evidence for severe non-response bias in our sample.

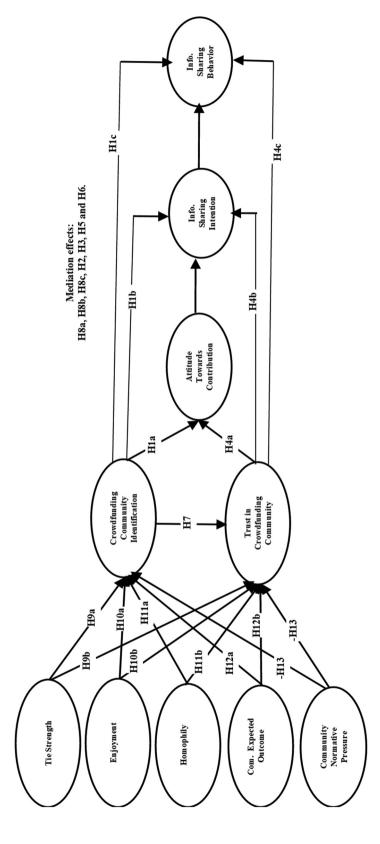


Figure 1. Research model (antecedents and outcomes of community identification and trust).



Table 1. Non-response bias check.

| | Mean of 1st respondents | Mean of 2nd respondents | T | Df | p value |
|------------------|-------------------------|-------------------------|---------|--------|---------|
| Age | 43.679 | 41.673 | 1.9153 | 551.89 | 0.056 |
| Sex | 0.471 | 0.518 | -1.1019 | 554 | 0.271 |
| Online Browsing | 3.115 | 3.119 | -0.034 | 553 | 0.973 |
| E-commerce time | 1.805 | 1.802 | 0.052 | 542.6 | 0.958 |
| E-mail time | 2.61 | 2.723 | -1.234 | 553 | 0.217 |
| Networking sites | 2.751 | 2.745 | 0.064 | 552.95 | 0.949 |

3.3. Normality check

As a requirement for SEM estimations, we check for the multivariate normality in our data following the Mardia (1970) test. The test shows that our data were non-normally distributed. For robustness, we also check for univariate normality of all measurement items using the Shapiro and Wilk (1965) test. The results confirmed the non-existence of univariate normality as all p-values were below 0.05. As none of the variables were normally distributed, the Satorra-Bentler rescaling method (also known as robust maximum likelihood) was employed for SEM estimation, as suggested by Rosseel (2012). The rest of the analyses follow this approach.

3.4. Measurement model

Since the concepts in our model do not have simple objective measures, we have opted for the multi-item measurements that are presented in Table 3. All items were rated on a 7-point Likert-scale, where "1" represented complete disagreement with the statement and "7" complete agreement with it. Reverse coding was used for items that were inversely framed. These items were adopted from earlier studies and readjusted to fit the crowdfunding context. Accordingly, we have used SEM, specifically the lavaan package of the R software suit in our analysis. This is due to SEM's ability to reliably test a complex set of hypothetical relationships among theoretical constructs as well as the relationships between the constructs and their observed indicators (Deng, Yang, and Marcoulides 2018; Rosseel 2012).

First, we conducted an exploratory factor analysis (EFA) which resulted in the removal of some items (see Table 2), which either exhibited cross loadings or low levels of loading below 0.4 (Hair et al. 2010). Second, we followed this by a confirmatory factor analysis (CFA) with all items that were deemed valid.

Examination of the fit indices in Table 3 reveals that the ratio of the chi-square and degrees of freedom (738.555/375) was 1.97, and below the upper threshold of 3. The comparative fit index (CFI) of 0.961 and the Tucker-Lewis index (TLI) of 0.954, all exceed the minimum threshold of 0.9. Root Mean Square Error of Approximation (RMSEA) value of 0.042, and Standardized Mean Square Route (SRMR) value of 0.066, are all below the 0.08 maximum threshold. Hence, all indicators meet threshold requirements as recommended by best practice (Hair et al. 2010), and suggest good fit for our measurement model.



Table 2. Survey items, measurement properties and sources.

| Latent constructs | | Measurement items | Factor loadings | Source |
|--------------------------------|-------|---|----------------------|--|
| TS (Ties strength) | TS1 | Approximately how frequently do you communicate with other members of crowdfunding communities? | | TS1–3 adapted from "tie strength" (online WoM) in Chu and Kim |
| | TS2 | Overall, how important to you are other members of crowdfunding community? | 0.855*** | (2011) |
| | TS3 | Overall, how close do you feel to other members of the crowdfunding community? | 0.902*** | |
| NCP (Normative community | NCP1 | My crowdfunding activities are often influenced by how other crowdfunding community members want me to behave. | 0.914*** | NCP1-2 adapted from "normative community pressures' |
| pressure) | NCP2 | To be accepted, I feel I must behave as other crowdfunding community members expect me to behave. | Removed | (related to brand communities) in Algesheimer et al. |
| | NCP3 | Other community members expect me to participate in the crowdfunding community. | 0.789*** | (2005). NCP3–4 adapted from |
| | NCP4 | My participation in the crowdfunding community is often influenced by how other community members want me to behave. | 0.869*** | "social norms" (related to online travel communities) in Casalo et al. (2010) |
| EJMT (Enjoyment) | EJNT1 | I find using crowdfunding websites to be enjoyable. | 0.894*** | EJMT1–3 adapted from "perceived |
| | | The actual process of using crowdfunding websites is pleasant. | Removed | enjoyment" (related to IT system use) in |
| | | I have fun using crowdfunding websites. While using crowdfunding websites, I experience pleasure. | 0.783*** 0.884*** | Venkatesh and Bala (2008). EJMNT4 adapted from "perceived enjoyment" (related to blogging tools) in |
| HOM | HOM1 | In general members of crowdfunding | 0.833*** | Hsu and Lin (2008) HOM1–3 adapted from |
| (Homophily) | HOM2 | communities think like me. In general members of crowdfunding communities behave like me. | 0.839*** | "homophily" (related to SNS) in Chu and Kim (2011) |
| | НОМЗ | In general members of crowdfunding communities are like me. | Removed | |
| COE Community outcome | COE1 | Contributing to crowdfunding campaigns will be helpful to the successful functioning of the crowdfunding community. | 0.857*** | COE1–3 adapted from "community-related outcome |
| expectation) | COE2 | Contributing to crowdfunding campaigns would help crowdfunding communities to continue operations in the future. | 0.865*** | expectations" (related to online communities) in Chiu |
| | COE3 | Contributing to crowdfunding campaigns would help the crowdfunding community grow. | 0.896*** | et al. (2006) |
| CCI (Crowdfunding | CCI1 | I am very attached to the crowdfunding community. | Removed | CID1–4 adapted from "community |
| community identification) | CCI2 | The friendships I have with other crowdfunding community members mean a lot to me. | Removed | identification" (related to brand |
| identification) | CCI3 | If a crowdfunding community member planned something, I would think of it as something "we" would do rather than something "they" | Removed | communities) in Algesheimer et al. (2005). |
| | CCI4 | would do. I see myself as part of the crowdfunding community. | 0.807*** | CID5–7 adapted from "identification" (related to online |
| | CCI5 | I feel a sense of belonging towards the crowdfunding community. | 0.904*** | communities) in Chiu et al. (2006). |
| | CCI6 | I have a feeling of togetherness or closeness in the crowdfunding community. | 0.842*** | ct u (2000). |
| | CCI7 | I am proud to be a member of a crowdfunding community. | Removed | |

(Continued)

Table 2. (Continued).

| Latent constructs | | Measurement items | Factor loadings | Source |
|----------------------------------|------|--|--------------------|---|
| CCT (Trust in crowdfunding | CCT1 | Crowdfunding community members will not take advantage of others even when the opportunity arises. | 0.773*** | TCC1–4 adapted from "trust" (related to online communities) |
| com) | CCT2 | Crowdfunding community members will always keep the promises they make to one another. | 0.722*** | in Chiu et al. (2006). |
| | CCT3 | Crowdfunding community members behave in a consistent manner. | Removed | |
| | CCT4 | Crowdfunding community members are truthful in dealing with one another. | 0.902*** | |
| ATT (Attitude | ATT1 | I think I would like to contribute to crowdfunding campaigns. | 0.782*** | ATT1–2 adapted from "attitude" (towards |
| towards contribution) | ATT2 | I am likely to feel good about contributing to crowdfunding campaigns. | Removed | blog usage) in Hsu and Lin (2008). |
| | ATT3 | I think contributing to crowdfunding campaigns is good for me. | 0.857*** | ATT3-6 adapted from "attitude" (towards |
| | ATT4 | I think contributing to crowdfunding campaigns is appropriate for me. | Removed | online shopping) in Hsu et al. (2006) |
| | ATT5 | I think contributing to crowdfunding campaigns is beneficial for me. | 0.830*** | |
| | ATT6 | I have a positive opinion about contributing to crowdfunding campaigns. | 0.754*** | |
| ISI (Information sharing | ISI1 | I intend to share information about crowdfunding campaigns I know of more frequently in the future. | Removed | ISI1–6 adapted from "eWoM intention" in Cheung and Lee |
| intention) | ISI2 | I intend to share information about crowdfunding campaigns I supported more frequently in the future. | 0.892*** | (2012). |
| | ISI3 | I will always provide information about crowdfunding campaigns I know of at the request of others. | Removed | |
| | ISI4 | I will always provide information about crowdfunding campaigns I supported at the request of others. | Removed | |
| | ISI5 | I will try to share information about crowdfunding campaigns I know of in a more effective way. | Removed | |
| | ISI6 | I will try to share information about crowdfunding campaigns I supported in a more effective way. | 0.921*** | |
| ISB (Info-sharing | ISB1 | I frequently share information about crowdfunding campaigns. | 0.900*** | ISB1-2 adapted from "eWoM participation" |
| behavior) | ISB2 | I spend much effort sharing information about crowdfunding campaigns. | 0.735*** | in Yoo et al. (2013). |

Table 3. Goodness-of-fit indices for SEM models.

| Goodness-of-fit indices | Thresholds and references | SEM model |
|-------------------------|----------------------------------|--------------------|
| CFI | >0.90, Bentler (1990) | 0.961 |
| TLI | >0.90, Bentler and Bonett (1980) | 0.954 |
| RMSEA | <0.08, Hu and Bentler (1999) | 0.042 |
| SRMR | <0.08, Hair et al. (2010) | 0.066 |
| χ2 (t-statistic/df) | < 3, Hair et al. (2010) | 1.97 (738.555/375) |

3.5. Validity and reliability

Table 4 presents composite reliability for all our latent variables, with Cronbach alphas levels all well above 0.7 (Cronbach 1951). Furthermore, to confirm divergent validity, ensuring variables are distinguished from each other, we use the Fornell and Larcker

| Table 4. Latent construct correlations, reliability (Cronbach's alpha) and divergent validity. |
|--|
|--|

| | R* | ISB | ISI | TCC | EJMT | CID | HOM | NCP | TS | COE | ISA |
|------|------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| ISB | 0.79 | 1 | -0.465 | -0.037 | -0.09 | -0.131 | -0.134 | -0.021 | -0.1 | -0.047 | -0.159 |
| ISI | 0.9 | 0.682 | 1 | -0.102 | -0.129 | -0.116 | -0.108 | -0.015 | -0.09 | -0.099 | -0.269 |
| CCT | 0.84 | 0.193 | 0.319 | 1 | -0.126 | -0.207 | -0.202 | -0.05 | -0.082 | -0.259 | -0.192 |
| EJMT | 0.89 | 0.3 | 0.359 | 0.354 | 1 | -0.151 | -0.092 | -0.019 | -0.042 | -0.063 | -0.282 |
| CCI | 0.88 | 0.362 | 0.34 | 0.455 | 0.388 | 1 | -0.476 | -0.307 | -0.231 | -0.124 | -0.115 |
| HOM | 0.82 | 0.366 | 0.329 | 0.45 | 0.303 | 0.69 | 1 | -0.215 | -0.135 | -0.126 | -0.103 |
| NCP | 0.89 | 0.144 | 0.122 | 0.223 | 0.138 | 0.555 | 0.464 | 1 | -0.077 | -0.004 | -0.001 |
| TS | 0.89 | 0.316 | 0.3 | 0.286 | 0.205 | 0.481 | 0.368 | 0.278 | 1 | -0.071 | -0.032 |
| COE | 0.91 | 0.217 | 0.315 | 0.509 | 0.251 | 0.353 | 0.355 | 0.061 | 0.267 | 1 | -0.18 |
| ATT | 0.88 | 0.399 | 0.519 | 0.438 | 0.531 | 0.34 | 0.321 | 0.038 | 0.18 | 0.424 | 1 |
| AVE | | 0.676 | 0.822 | 0.644 | 0.731 | 0.726 | 0.7 | 0.738 | 0.735 | 0.762 | 0.651 |

The figures below and above the diagonal (in parentheses) are the correlations of the constructs and squared of correlations of the constructs respectively. Abbreviation keys: see Table 2. R* = Reliability as measured by Cronbach's alpha. AVE = Average Variance Extracted.

(1981) criteria, showing that the squared correlations value for each construct is less than its respective Average Variance Extracted (AVE) value, confirming divergent validity.

3.6. Common method bias

Common method bias may arise when the same measurement scale is used throughout a survey. We examine whether our data suffers from such bias following procedures suggested by Podsakoff et al. (2003). First, we use Harman's single-factor approach by creating a single factor with all measurement items in EFA with no rotation where the single factor explains 28% of variance in our sample, which is below the recommended maximum threshold of 50%. Second, we use the common latent factor approach by adding a "common" latent factor in the original CFA model, for which there is no reason to assume correlations with the model's latent variables and fixed equal factor loading of all measurement items of the common factor. This yielded a value of 0.589, which is then squared, indicating an explanatory level of 35%, which is again below the 50% threshold level. Finally, for further robustness, we also use the marker variable approach (Williams, Hartman, and Cavazotte 2010), employing the "sense of entitlement" factor and its seven items (Campbell et al. 2004). The marker variable's square value of loading indicates an explanatory power of 25%, also below the 50% threshold. All checks remove concern of a common method bias in our data.

4. Results

Figure 2 and Table 5 present the results of our analyses. We tested all hypothesized associations with two additional controls - age and sex. As shown in Table 3, our model passes all goodness-of-fit tests, and results with the following levels of explanatory power, as captured by the r-square values (see Figure 2): 63.8% for community identification, 40.1% for community trust, 24% for attitudes, 31.1% for information-sharing intentions, and 50.2% for information-sharing behavior.

First, in terms of the outcomes of CCI we find that it was positively associated with contribution attitudes, as well as information-sharing intentions and behaviors,

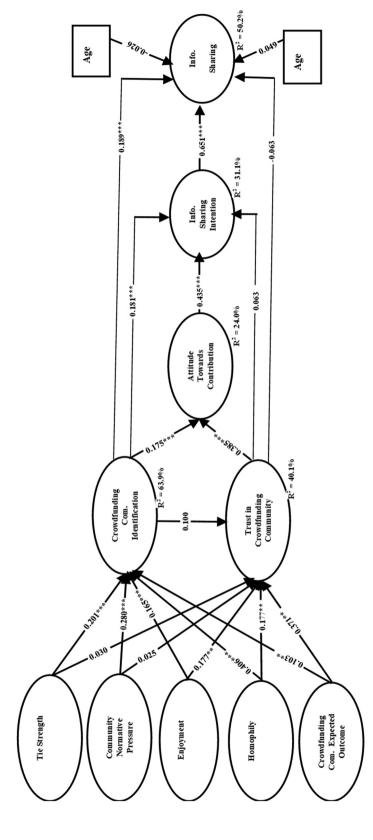


Figure 2. Estimated structural equation model. Number of observations is 556 for all constructs. Goodness-of-fit indices: ***p < 0.001, **p < 0.01, *p < 0.05. CFI = 0.961 > 0.90, TLI = 0.949 > 0.90, RMSEA = 0.043 < 0.08, SRMR = 0.066 < 0.08, $\chi 2 = 1.97 < 3$ (t-statistic/df 738.555/375).

Table 5. Summary of hypotheses testing and estimation results.

| Hypothesis | Std. estimate | Result |
|--|-------------------|---|
| Outcomes of crowdfunding community identification and trust | | |
| H1(a): CF Community identification → attitudes towards contribution | 0.175 (0.048)*** | Supported |
| H1(b): CF Community identification → info-sharing intentions | 0.181 (0.056)*** | Supported |
| H1(c): CF Community identification → info-sharing behavior | 0.189 (0.053)*** | Supported |
| H7: CF Community identification → community trust | 0.100 (0.067) | Not supported |
| H4(a): CF Community trust → attitudes towards contribution | 0.385 (0.078)*** | Supported |
| H4(b): CF Community trust → info-sharing intentions | 0.053 (0.076) | Not supported |
| H4(c): CF Community trust → info-sharing behavior | -0.095 (0.064) | Not supported |
| Attitudes → info-sharing intention | 0.435 (0.062)*** | • |
| Info-sharing intentions → info-sharing behavior | 0.651 (050)*** | |
| Mediation effects | | |
| H8(a): CF Community identification → CF community trust → attitudes towards contribution | 0.039 (0.029) | No mediation |
| H8(b): CF Community identification → CF community trust → info-sharing intentions | 0.005 (0.007) | No mediation |
| H8(c): CF Community identification → CF community trust→ info-sharing behavior | -0.010 (0.010) | No mediation |
| H2: CF Community identification → attitudes towards contribution → info- sharing intentions | 0.076 (0.027)** | Partial mediation |
| H3: CF Community identification → info-sharing intentions→ info-sharing behavior | 0.118 (0.036)*** | Partial mediation |
| H5: CF Community trust → attitudes towards contribution → info-sharing intentions | 0.168 (0.046)*** | Full mediation |
| H6: CF Community trust → info-sharing intentions→ info-sharing behavior | 0.035 (0.047) | No mediation |
| Antecedents of crowdfunding community identification and trust | | |
| H9(a): Tie strength → CF community identification | 0.201 (0.800)*** | Supported |
| H9(b): Tie strength \rightarrow CF community trust | 0.030 (0.066) | Not supported |
| H10(a): Enjoyment → CF community identification | 0.165 (0.036)*** | Supported |
| H10(b): Enjoyment → CF community trust | 0.177 (0.043)** | Supported |
| H11(a): Homophily → CF community identification | 0.406 (0.068)*** | Supported |
| H11(b): Homophily → CF community trust | 0.177 (0.065)** | Supported |
| H12(a): Community outcome expectation → CF community identification | 0.103 (0.034)** | Supported |
| H12(b): Community outcome expectation → CF community trust | 0.371 (0.043)*** | Supported |
| H13(a): Normative community pressure → CF community identification | 0.280 (0.063) *** | Not supported |
| H13(b): Normative community pressure → CF community trust | 0.025 (0.058) | Not supported |
| Controls | | |
| Age | -0.026 (0.004) | Non-sig. |
| Sex | 0.100 (0.049) | Non-sig. |

Note: Number of observations is 556 for all constructs. Goodness-of-fit indices: ****p < 0.001, **p < 0.01, *p < 0.05. CFI = 0.961 > 0.90, TLI = 0.949 > 0.90, RMSEA = 0.043 < 0.08, SRMR = 0.066 < 0.08, χ 2 = 1.97 < 3 (t-statistic/df 738.555/375).

supporting hypotheses H1(a), H1(b), and H1(c). We also find that contribution attitudes partially mediate the effect of CCI on information-sharing intentions, supporting H2, as well as that intentions mediate the effect of CCI on information-sharing behavior, supporting H3.

Second, in terms of outcomes of CCT we find that it was positively associated with contribution attitudes, but not with information-sharing intentions or behavior, hence supporting H4(a) but rejecting H4(b) and H4(c). We also find that contribution attitudes fully mediate the effects of CCT on information-sharing intentions, hence supporting H5, but find no mediation effects of information-sharing intentions betrween CCT and behavior, hence rejecting H6.

Third, we find no direct effect of CCI and CCT, hence rejecting H7. CCT also does not mediate the effects of CCI on contribution attitudes, information-sharing intentions, or behavior, rejecting H8(a), H8(b), and H8(c).

Fourth, when examining the antecedents of CCI, we find that tie strength, enjoyment, homophily, community outcome expectations, and normative community pressures have a positive effect on CCI, supporting H9(a), H10(a), H11(a), and H12(a), but rejecting H13(a), which expected a negative effect of normative community pressures.

Finally, when examining the antecedents of CCT, we find that enjoyment, homophily, and community outcome expectations are all positively associated with CCT, supporting H10(b), H11(b), and H12(b). However, no association was identified with respect to tie strength and community normative pressures, rejecting H9(b) and H13(b).

5. Discussion

Our findings confirm the importance of CCI and CCT in enhancing contribution attitudes, information-sharing intentions, and behaviors in the context of online crowdfunding communities. Both reflecting aspects deemed critical for the success of fundraising efforts via crowdfunding (Hobbs, Grigore, and Molesworth 2016; e.g., Bi, Liu, and Usman 2017; Borst, Moser, and Ferguson 2017; Shneor, Mrzygłód, et al. 2021; Kleinert and Volkmann 2019).

First, while earlier studies of crowdfunding showed a direct positive association between community identification and participation intentions (Gunawan et al. 2019; Rodriguez-Ricardo, Sicilia, and López 2018), our study supports this association and adds evidence that this effect is also partially mediated by attitudes towards crowdfunding contributions. This finding is also in line with earlier studies conducted in other types of online communities including online travel (Casaló, Flavián, and Guinalíu 2010a) and blogging communities (C. Shen and Chiou 2009).

Second, earlier studies in crowdfunding identified positive relations between trust in fundraiser and/or trust in platform and contribution intentions (Alharbey and Van Hemmen 2021; Baber and Fanea-Ivanovici 2021; Kang et al. 2016; Liang, Wu, and Huang 2019). Different from these studies, we focus on trust in the crowdfunding community itself, which may have some but not complete overlap with trust in the platform. Regardless, we show that this specific kind of trust is positively associated with attitudes, which also fully mediates its effect on information-sharing intentions. However, it does not seem to exert influence on actual information-sharing behavior. This contradicts earlier findings from studies in non-crowdfunding contexts, which do confirm associations between trust and behavior in an online brand community (Yeh and Choi 2011), and gaming communities (C. Hsu, Chiang, and Huang 2012; Tsai and Hung 2019). Here, a likely explanation for this discrepancy is that, unlike the current study, these studies did not incorporate attitudes and intentions in their models, while only measuring behavior. Such modelling may camouflage the complex relations between attitudes, intentions and behavior and their antecedents, which are specified in greater detail in the model estimated in the current study.

The above explanation may also be extended to the surprising findings where CCI did not affect CCT, and that CCT did not mediate effects of CCI. This can result from the nonspecification of attitudes and intentions in models of some earlier studies (C. Hsu, Chiang, and Huang 2012; Yeh and Choi 2011), or non-specification of behavior in others (M.-H. Hsu, Chuang, and Hsu 2014). An alternative explanation may be embedded in the specific context of our study, with Finland representing a high trust society (Shneor, Mrzygłód,

et al. 2021), which may lead to lower variance in responses concerning the trusting of others, compared to other environments. Combining the above arguments with the fact that outside our model, CCI was significantly correlated with trust in crowdfunding community (see Pearson correlation in Table 5), one can argue that the two factors are associated, but this association is relatively weaker when considering all other effects captured in our model, especially when collecting such data in high trust social contexts.

Next, in terms of the antecedents of CCI, we find a positive association with tie strength. This supports earlier findings in a study of virtual communities in the context of online shopping (Pai and Tsai 2011); positive association with enjoyment, supporting earlier findings in a study of online travel community (Chang et al. 2020); positive association with homophily, supporting arguments made in a study of brand community (Algesheimer, Dholakia, and Herrmann 2005); and positive association with community outcome expectations, supporting arguments made in research on knowledge sharing communities (Wasko and Faraj 2000). In this respect we extend the generalizability of such associations also to the context of information-sharing by members of crowdfunding communities.

However, unexpectedly, we find a positive rather than a negative association between CCI and community normative pressures. This may be explained by the potential nonlinear effect of normative pressure, which can be encouraging up to some point, but then discouraging if becoming excessive and hence unpleasant, as suggested by Hsu et al. (2012). In such case, the evidence in our study indicates that community normative pressures in crowdfunding have not crossed this boundary, and still result in positive normative commitment (Luo et al. 2021) rather than burden.

With respect to the antecedents of CCT, our study supports earlier findings with respect to its positive association with enjoyment (Hwang and Kim 2007; Rouibah, Lowry, and Hwang 2016) and homophily (Brown, Broderick, and Lee 2007; Cho, Park, and Lee 2020). And we also present evidence for a new association between community outcome expectations and CCT.

However, we find no significant association between CCT and tie strength, which contradicts earlier findings in studies of online communities (Brown, Broderick, and Lee 2007) and social media (Leonhardt, Pezzuti, and Namkoong 2020). A possible explanation here is the different focus of these studies on information seeking and evaluation rather than sharing, and more importantly in the different models being tested, which did not include the core variables of our model – attitudes and intentions, and hence ignoring the complex relations they have with the relevant antecedents explored in our study. Furthermore, we also do not find support for our expectations of a negative association between normative pressures and CCT. This result could be explained by a combination of earlier claims about non-linear effects of normative pressures, and low variance of community trust in high trust societies.

6. Conclusion

Information-sharing is critical for the successful practice of crowdfunding. The current study provides evidence for the relevance and importance of CCI and CCT in enhancing information-sharing in crowdfunding. A model, accounting for both the outcomes and antecedents of CCI and CCT, is presented and tested based on a sample of 556 Finnish

reward-crowdfunding platform users. The results show that CCI is positively associated with contribution attitudes, information-sharing intentions, and behaviors, while CCT is associated with contribution attitudes, which further fully mediates its effect on information-sharing intentions. We also show that enjoyment, homophily, and community outcome expectations are positively associated with both CCI and CCT. However, tie strength and normative pressures are only associated with CCI but not with CCT. As such, our study complements earlier research, by presenting an alternative framework for explaining information-sharing behavior in crowdfunding, which is anchored in the notion of crowdfunding as a community-embedded phenomenon.

6.1. Limitations and implication for research

While presenting interesting findings, our study has some limitations that should be acknowledged and serve as invitations for future research. First, the generalizability of our study may be constrained to the national-cultural context in which it was collected-Finland, as well as to the specific type of crowdfunding considered – reward crowdfunding. Accordingly, future studies may attempt to test our model in new national contexts, as well as with respect to different crowdfunding models such as equity investments, lending, or donation giving.

Second, our study focuses on information-sharing intentionality and behavior in a crowdfunding community context but does not cover other types of supportive behaviors such as financial contribution or product development engagements. Hence, future studies may retest the suggested model with respect to other types of intentions and behaviors.

Third, measurements of aspects related to the crowdfunding community were defined broadly and not with specific reference to the Mesenaatti platform. This was done based on the assumption that being invited by a specific platform based on registration and activity on that specific platform would suffice in eliciting reference to that platform when considering the crowdfunding community. Nevertheless, future research may use platform specific measurements to ensure responses with respect to a specific platform community. Such efforts may follow a comparative design to examine whether responses differ when using general references to a crowdfunding community versus to a platform specific one.

Fourth, while our model already is quite complex, it may still be improved by additional influential variables as both antecedents of CCI and CCT, as well as antecedents of attitudes, intentions, and behaviors that complement them. Accordingly, researchers may draw on relevant theories to further develop the model. For example adopting concepts such as ease-of-use and perceived usefulness underlying the Technology Acceptance Model (Venkatesh and Davis 2000) may constitute an interesting direction. Alternatively incorporating other intrinsic and extrinsic motivations (Deci and Ryan 2012) into the model, may also contribute to its future development.

Finally, an additional avenue for future research may revolve around testing potential effects of interaction terms among antecedents and CCI and/or CCT. Specifically, researchers are encouraged to examine potential positive effects of interaction between homophily and tie strength on both CCI and CCT, as well as of the interaction between tie strength and enjoyment on CCI.

6.2. Implications for theory

The study and its findings also present several implications for theory. At a broad sense, the paper provides evidence for the merits of suggesting a novel theoretical set of hypotheses anchored in understanding of crowdfunding contributions as a communityembedded phenomenon. Specifically, we provide evidence for the importance of two concepts that were less explored in earlier work and modelling when attempting to explain contribution intentionality and behavior, namely - CCI and CCT. Here, while trust was highlighted in earlier research (e.g., Alharbey and Van Hemmen 2021; D. Chen, Lai, and Lin 2014; Kang et al. 2016; Liang, Wu, and Huang 2019), it mostly related to trust in the fundraiser or the platform, rather than the community. Furthermore, identification was largely ignored in earlier research, mostly highlighting aspects of homophily and similarity-based attraction (e.g., Giudici, Guerini, and Rossi-Lamastra 2020; Greenberg and Mollick 2016; Petit and Wirtz 2021), rather than the affective and emotional aspects of identification with others when explaining contribution intentionality and behavior.

As such, our community-based conceptualizations and explanations contribute to further extend and complement existing theoretical arguments that have been more frequently used in earlier research. Accordingly, when considering the three theoretical approaches identified in our literature review, we first extend the understanding and use of trust theory by introducing the concept of community trust. Second, in line with signaling theory, we suggest that both CCT and CCI can serve as signals aiding individuals in gaging information asymmetries when considering crowdfunding contributions under conditions of relative uncertainty. And third, by identifying relevant antecedents of attitudes and intentions, we may inform theoretical extensions for social psychological theories such as the theory of planned behavior.

Finally, we not only present the outcomes of CCT and CCI, but also their antecedents. Such insights present a more wholesome view of these theoretical concepts. As such, the study also contributes theoretically by suggesting conceptual linkages between enjoyment, homophily, and community outcome expectations and both CCT and CCI, which do receive empirical support.

6.3. Implication for practice

Our findings may highlight several implications for practice as well. First, platform managers are encouraged to invest further in community support features and tools that may enhance user lock-in effects through strengthened identification and trust in the community. For example, such elements may include a variety of benefits to selforganizing groups within the community that enhance their interactions, sense of affinity, strength of relations, as well as enjoyment from collective action. Other strategies may include awarding trust badges as visible icons to member profiles and avatars, as well as to whole sub-groups. Moreover, platforms may introduce voting functionalities for related group decision-making within the community, as well as for capturing and sharing sentiments around related opinions, expectations, and normative claims.



From the perspective of fundraisers, efforts should be made to convey how their projects and campaigns are congruent with the platforms' community interests and goals. This can be achieved by highlighting aspects of homophily with community members, as well as by providing evidence of good community citizenship. Moreover, fundraisers can use campaign tactics that may create opportunities for community members to experience enjoyment from collective action in the forms of individual/ group rewards for supportive behavior, as well as gaming features as part of their campaign promotional strategy.

Disclosure statement

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