RESEARCH PAPER



Relationship approach to crowdfunding: how creators and supporters interaction enhances projects' success

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Abstract

Crowdfunding has become a popular course for early-stage financing for a variety of campaigns. Research had focused mainly on factors contributing to campaigns' success, examining the creators and the supporters discretely. The current study contributes to the literature by exploring the interaction between creators and supporters. This interaction comprises a central contribution to campaign success. Relationship marketing was adopted to facilitate a better understanding of the relationship-based aspects of the interaction. The study combines survey-based data collection from samples of creators and supports, and success measures retrieved from the crowdfunding platforms. Our findings revealed significant differences in views between creators and supporters regarding the role of communication, commitment, bonding, and trust in their interaction. These differences can impact campaigns' success rates.

Keywords Crowdfunding · Relationship marketing · Creators · Supporters · Campaign success

JEL classification M31

Introduction

Crowdfunding represents an innovative approach toward early-stage financing that is increasingly recognized as a meaningful alternative to traditional funding sources (Agrawal et al. 2014; Mollick 2014; Moritz and Block 2015; Stevenson et al. 2018; Xie et al. 2019). Crowdfunding has been defined as "the efforts by entrepreneurial individuals and groups—cultural, social, and for-profit—to fund their ventures by drawing on relatively small contributions from a

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relatively large number of individuals using the internet, without standard financial intermediaries" (Mollick 2014, p. 2). Crowdfunding allows creators (entrepreneurs) to engage with potential supporters, exchange ideas, and ultimately introduce new products and services to the market (Belleflamme et al. 2014).

Building on its unique characteristics, and emphasized by the strong elements of social interaction encouraging more people to get involved (Kunst and Vatrapu 2018), crowdfunding has long surfaced as an effective marketing tool for both new ventures and established firms. As such, it allows creators to attract customer support and secure demand for forthcoming products (Brown et al. 2017). Moreover, crowdfunding has proven to be an effective tool in advancing public awareness, and communities that are established around the campaigns serve to attract returning supporters as well as generate ideas for new products (Gerber et al. 2012). This line of research spotlighted creator-supporter interaction, which stands at the core of crowdfunding. This interaction facilitates supporters' benefits (Gerber et al. 2012) and enables creators to improve their campaigns' performance (Wang et al. 2018). However, most of the crowdfunding literature thus far has examined creators and supporters discretely. On the creators' side, the literature has focused on their role and the



activities creators need to embrace in order to advance their campaigns' success (Belleflamme et al. 2014; Boeuf et al. 2014; Courtney et al. 2017), and on the supporters' side it examined the supporters' motivations and emotional aspects (Allison et al. 2015; Gerber and Hui 2013; Giudici et al. 2018; Zvilichovsky et al. 2018). Therefore, studies have neglected to address the mutuality that is at the base of crowdfunding and is manifested in creator-supporter interaction. This is puzzling, especially in light of the important role this interaction plays. The crowdfunding literature has yet to provide a comprehensive picture of the creators' and supporters' experience, and how these experiences interact to fuel crowdfunding success.

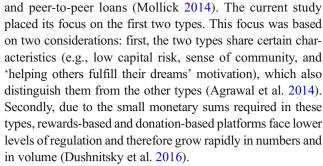
Following this gap in the literature, the present study explores the nature of the interaction between creators and supporters as drivers for campaign success. Following a previous call (Macht 2014), relationship marketing (RM) approach was adopted as a conceptual framework for this study. RM deals with the interaction between buyers and sellers in the marketplace as an antecedent for positive outcomes (Morgan and Hunt 1994). Specifically, four RM components, found to be highly relevant in the context of crowdfunding, were examined—communication, commitment, bonding, and trust (Beier and Wagner 2014; Bitterl and Schreier 2016)—for advancing campaigns' success, from both the creators and supporters' perspectives. To achieve this end, two separate surveys were carried out: One survey explored RM in the context of creators, whereas the second survey explored RM in the context of supporters.

The contribution of this study is two-fold. First, the study adds to current knowledge by illustrating how creators and supporters view their interaction in a single study, thus identifying when these views converge and when they substantially diverge. Furthermore, objective success measures were supplemented to the measures in support of the findings, thus enhancing the study's robustness. Second, the study addressed a link to the growing research on crowdfunding as a marketing tool by implementing RM constructs in furthering our understanding of the creator-supporter interaction.

Literature review

Crowdfunding as a marketing tool

Modern crowdfunding emerged in the late 1990s and the first decade of the 2000s, deriving from the interface of microfinancing practices (De Buysere et al. 2012; Morduch 1999) and crowdsourcing (Schwienbacher and Larralde 2010), and soon captured attention as a unique source for business funding (Mollick 2014). Most definitions of crowdfunding recognize four types of the phenomenon: rewards-based (pre-orders), donation-based (i.e., with no expectation of receiving a reward or product), equity-based (profit sharing),



Initially aimed at providing an alternative to traditional venture funding, enabling new businesses to deal with funding gaps in their early stages (Moritz and Block 2015), crowdfunding has long since outstripped its original purpose. Other value-adding outcomes have characterized crowdfunding, such as demonstrating demand for a proposed good, drawing attention to new ventures (Gamble et al. 2017; Mollick 2014), or facilitating further financing beyond the initial monetary pledge (Macht 2014; Wald et al. 2019). As such, crowdfunding has come to replace various marketing activities in which customers tend to be more involved and contribute in advancing the business venture, even before receiving the product or service (Felbermayr and Nanopoulos 2016; Xu et al. 2016).

In line with this, previous research on crowdfunding has highlighted the non-financial outcomes of crowdfunding campaigns received by the creators, the main two being the public exposure of both creators and their campaigns, and the establishment of an active community (Agrawal et al. 2014).

Behavioral aspects of Crowdfunding

In line with the growing research on crowdfunding outcomes, studies have sought to draw a clearer picture of the behavioral facets of crowdfunding participants. Crowdfunding is based on an ecosystem (World Bank 2013), whose stability requires that all parties benefit from their engagement; therefore, most research on this aspect has been concerned with participants' initial motives, leading to detailed frameworks of the types of motives associated with each type of participant (e.g., Agrawal et al. 2014; Gerber and Hui 2013). Several motives have been attributed to creators, aside from the lower cost, higher speed, and greater flexibility of the funding process. Among these are expanding awareness and market testing of the product (Moritz and Block 2015), forming long-term connections that extend the moment of financial interaction (Gerber et al. 2012), gaining online approval of their creativity (Mitra and Gilbert 2014), and using the "wisdom of the crowd" for various objectives (Moritz and Block 2015).

For supporters, Agrawal et al. (2014) identified five motives: access to investment opportunities, early access to new



products, community participation, supporting a cause or philanthropy, and formalization of contracts. The philanthropy motive was echoed in Ordanini et al. (2011), who argued that supporters are motivated by a feeling of patronage. As for supporters' expectations, most studies have focused on the impact of rewards expectation in facilitating supporters' satisfaction (Gierczak et al. 2015), and changes to supporters' expectations depending on them receiving a finished product or in relation to overfunded campaigns (e.g., Agrawal et al. 2015; Belleflamme et al. 2014; Mollick 2014). Bitterl and Schreier (2016) found that supporters in crowdfunding experience enhanced identification with the venture, thus contributing to increased consumption of the venture's products and positive word of mouth. Finally, Efrat et al. (2019) showed that supporters tend to distinguish between the creators and their campaigns when cultivating their engagement, and that this engagement has a positive impact on the campaigns' outcomes. Based on this, we can establish a direct link between supporters' motivations and the marketing-related benefits of crowdfunding.

Relationship marketing and Crowdfunding

RM has been defined as "all marketing activities directed toward establishing, developing, and maintaining successful relational exchanges" (Morgan and Hunt 1994, p. 22). RM addresses various aspects of the buyer-seller relationship that have been shown to contribute to firms' performance, such as loyalty, word of mouth, and cooperation (Palmatier et al. 2006). Its strength rests on the examination of the dyadic relationship between sellers' antecedents and buyers' outcomes, mediated through shared relational aspects (Palmatier et al. 2006). Studies have shown the relevance of RM in various sectors (Gilboa et al. 2019; Watson and Johnson 2010), across firms' functions and activities (Brettel et al. 2012), as well as in different types of firms (Adjei and Clark 2010; Theron and Terblanche 2010).

While advocated for its application to the crowdfunding research (Macht 2014), RM has yet to be tested in this context. Based on the nature of RM and its relevance to firms' performance (Palmatier et al. 2006), along with shared characteristics between crowdfunding activity and seller-buyer interaction as surfaced in Bitterl and Schreier (2016), we sought to explore the relevance of RM in the crowdfunding context.

While there is no consensus on a set of specific constructs comprising RM, previous crowdfunding studies have identified relevant constructs associated with RM, such as communication, bonding, trust and commitment (Beier and Wagner 2014; Bitterl and Schreier 2016; De Buysere et al. 2012; Gerber et al. 2012; Ingram and Teigland 2013; Ordanini et al. 2011), thus supporting the notion that RM can be used

to explain crowdfunding creator-backers' interaction. These components were also prominent among many RM studies, and were identified as components of RM orientation (Sin et al. 2005).

Hypotheses development

The role of communication

Communication refers to the frequency and quality of the information shared between buyers and sellers (Mero 2018), or creators and supporters (Palmatier et al. 2006). Frydrych et al. (2016) highlighted the role of narratives embedded in the communication presented by the creators to their supporters in leveraging emotional involvement. They recommended the co-creation of such narratives to enhance fundraising. Furthermore, Gerber and Hui (2013) emphasized the importance of using various channels of communication between creators and supporters in achieving campaign success.

While communication received substantial attention, most research efforts have adopted operational measures of communication, such as frequency of updates (Block et al. 2018; Kuppuswamy and Bayus 2018), type and channel of communication (Zheng et al. 2014), and the campaign features (Belleflamme et al. 2014; Bi et al. 2017) as affecting crowdfunding success. In line with the RM orientation, we sought to investigate how direct and open communication, based on sharing information and maintaining contact with supporters, will influence campaign success. Hence, we posed the following hypothesis:

H1: Direct and open communication between the creators and their supporters will be positively linked to campaign success

The impact of bonding

Bonding is a sense of affection and belongingness felt by the buyers. It is an outcome of the two parties (sellers and buyers) working together toward a mutual goal. Bonding is a central issue in crowdfunding, tapping the main aspect of shared values, which act as the glue that facilitates the creator- supporter relationship (Gerber and Hui 2013; Macht 2014). Previous findings have shown that effective communication by the creators influence the creation of community and shared values, both central contributors of bonding (Kim et al. 2010; Macht 2014), and these, in turn, boost campaign success (Agrawal et al. 2015; Josefy et al. 2016). Therefore, we posed the following hypothesis:

H2: Bonding between creators and supported will be positively linked to campaign success



The impact of commitment

Commitment is described as a desire to share a valued relationship. It is a significant contributor to customer loyalty (Gilboa et al. 2019) and is thus valued by sellers (Palmatier et al. 2006). Gleasure and Feller (2016) contended that many crowdfunding communities are anchored together by social or ideological values. Commitment, much like bonding, is triggered by such resemblances and shared values of creators and supporters. These connections drive supporters to choose specific campaigns and then recruit others to join them in their support (Agrawal et al. 2014; Gerber et al. 2012). Addressing a different aspect, Chan et al. (2015) found that business ventures that engage their customers in disseminating their idea showed improved performance. Zhao et al. (2017) found that commitment has a substantial positive influence on supporters' funding intentions. Therefore, we posed the following hypothesis:

H3: Commitment between creators and supporters will be positively linked to campaign success

The impact of trust

Trust is an outcome of the parties' confidence in each other's integrity. It plays a significant role in the seller-buyer relationship, having a strong impact on sellers' performance indicators (Palmatier et al. 2006). Indeed, the aspect of trust is manifested in various components of business transactions and therefore, has a significant impact on firm performance (Mohr and Puck 2013). In the crowdfunding context, trust appears to be crucial for both types of participants; for instance, creators are highly recommended to establish a trustworthy image to promote the campaign's success (Agrawal et al. 2014).

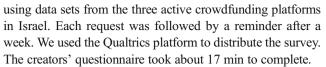
Furthermore, previous findings have shown that a dynamic creator-supporter relationship, nurtured through personal messaging, encourages trust development and that such trust advances the campaign's performance (Zheng et al. 2016). In light of the central role of the creator in establishing trust, we offer the following hypothesis (Fig. 1):

H4: Trust between creators and supporters will be positively linked to campaign success

Method

Survey samples and procedure

Creators The survey was sent as a link via email to creators of crowdfunding campaigns that were launched during 2016,



A total of 106 usable questionnaires were received (24% response rate) within 5 weeks from the initiation of the research. Of the 106 respondents, 56% reported having initiated a donation-based campaign; 51% were women. The average age of creators was 42, 58% held an academic degree, and about 62% reported earning an average or above-average income. As for the campaigns, the average funding goal was \$10,000 and 74% reached it. About 84% of the campaigns had over 100 supporters with an average of 223 supporters per campaign. The main categories were Music (34%), Books (31%), and Movies (21%).

Supporters The survey was forwarded to supporters of crowdfunding campaigns launched during 2016, using data sets from the three active crowdfunding platforms in Israel. Each request was followed by a reminder after a week. We used the Qualtrics platform to distribute the survey. The supporters' questionnaire took about 21 min to complete.

A total of 128 usable questionnaires were received (12.5% response rate). Of these, 81% had supported a donation-based campaign. Most respondents were male (74%), 50% were between 20 and 36 years old, 80% held an academic degree, and 63% reported having an average or above-average income. Most respondents (78%) reported having heard of the crowdfunding campaign from either family, friends, or via social media, and only 13% reported that the creator was a close family member. Seventy-five percent of the respondents had supported other campaigns, either before or after the campaign they were being asked about in the survey. As for the campaigns, the three most popular categories were social agendas (33%), books (31%), and music (23%). The average amount set was \$23,000, and the average amount raised was \$26,000. The majority of the campaigns had more than 300 supporters (73%), with an average of 1115 supporters per campaign.

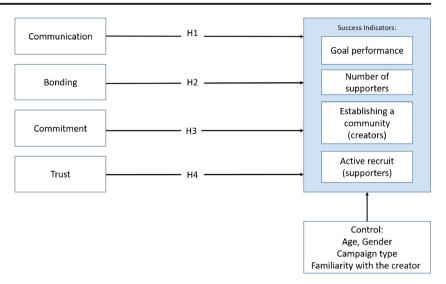
The decision to combine the data on rewards-based and donation-based campaigns for each of the roles - supporters and creators - relied on the shared characteristics of the two types (rewards and donations) as revealed in previous research (Agrawal et al. 2014; Gerber and Hui 2013; Mollick 2014). These similarities are manifested primarily in the small amounts contributed, the emotional attachments developed over the campaign's life cycle, and the types of supporters involved in the campaign – beginning with family and friends and progressing to the general crowd.

Survey instrument and measures

The study constructs were assessed by a questionnaire compiled from several measures appearing in the marketing



Fig. 1 Conceptual model



literature, with stylistic and idiomatic modifications made to better fit our study. All scales were presented on a 7-point Likert-type scale (see Appendix A for the full questionnaire and factor loadings). Having incorporated pre-existing measures, we first performed an exploratory factor analysis (EFA) to ensure item loading on the relevant construct. The EFA results confirmed the constructs' structure. We then continued to perform confirmatory factor analysis (CFA). Convergent validity was tested by calculating the average variance extracted (AVE) for each construct in the CFA (Fornell and Larcker 1981). The lowest AVE for the creators' sample was .60 and for the supporters' sample, .67, suggesting that, on average, the amount of variance explained by the items is greater than the unexplained variance. Discriminant validity was examined by comparing the squared AVE values with the correlations between dimensions. All the squared AVE values exceeded the correlations for each pair. Regarding reliabilities, CR values ranged from .71 to .93 indicating good reliabilities (see Table 1 for creators and supporters' samples, respectively).

Nonresponse bias was tested by comparing early and late respondents (see Armstrong and Overton 1977). No significant differences were found on sample characteristics for either the creators or the supporters (Trust = -.308/1.005; Commitment = -.116/-.757; Bonding = -.308/-.486, respectively).

Communication was measured using a 3-item scale sourced from Sin et al. (2005), addressing the communication's perceived levels of openness and closeness between the creators and their supporters.

Bonding was measured using a 3-item scale adapted from Mattila (2001), addressing the creators' encouragement of their supporters to develop an emotional connection and supporters' emotional attachment to the campaign.

Trust for the creators' sample was measured using a 4-item scale sourced from Adjei et al. (2009), addressing the different

steps taken to enhance the level of confidence supporters developed toward the creators. Trust for the supporters' sample was measured with a 3-item scale sourced from Adjei et al. (2009), addressing the level of confidence supporters developed toward the creators.

Commitment was measured using a 3-item scale adapted from Palmatier et al. (2006), capturing the various aspects of the relationship established between creators and their supporters, as well as how the relationship encouraged supporters to develop a sense of commitment to the campaign.

External measures of success. Two criteria were selected to indicate campaign success. Both were derived from the crowdfunding platforms: goal performance, calculated as the ratio of the funds raised relative to the goal, and the number of supporters per campaign. By using these external measures, we could enhance our understanding of the RM constructs' impact on the campaigns' performance.

Additional success indicators. Previous studies indicated that crowdfunding participants consider also several subjective measures as indicators of success (Gerber and Hui 2013). Following this we have decided to add two such indicators to our survey. For the supporters, we included 'active recruitment' measuring how active they had been in recruiting additional supporters. The measurement was based on a 4-item scale adapted from Sicilia et al. (2016). For the creators, we added one item of 'establishing an active community' measuring their perception of the campaign success in creating community of supporters.

Findings

All analyses reported in this section were carried out with AMOS 23 software, employing the maximum likelihood approach (Anderson and Gerbing 1988). Before testing our hypotheses in both studies, we performed two preliminary



 Table 1
 Descriptive statistics and correlation matrix

Creators	CR	AVE	Mean	SD	1	2	3	4	5	6
1. Bonding	.73	.69	1.7	.16	.83					
2. Communication	.73	.67	.84	.16	.61**	.83				
3. Trust	.81	.72	2.3	.19	.37**	.17	.85			
4. Commitment	.87	.60	1.4	.35	.39**	.52**	.19	.77		
5. Establish a community			5.5	1.3	.25*	.52**	.39**	.40**		
6. Goal performance			1.2	1. 3	.11	.10	.002	.23*	.003	
7. No. of supporters			395.3	752.6	44**	27**	07	05	.05	011
Supporters	CR	AVE	Mean	SD	1	2	3	4	5	6
1. Communication	.71	.67	.88	.54	.82					
2. Bonding	.84	.80	.98	.28	.34**	.89				
3. Commitment	.93	.77	.96	.41	.54**	.24*	.88			
4. Trust	.85	.81	1.7	.27	.09	.06	.35**	.90		
5. Active recruitment	.89	.81	78.	.79	.36**	.26*	.40**	.19	.90	
6. Goal performance			1.4	.96	.07	.16	03	002	.25*	
7. No. of supporters			1115	1586.3	15	.24*	08	11	.01	.36**

Square rooted AVEs (convergent validity) on the diagonal; the constructs means are calculated with their factor score weights. *p < .0.5; **p < .01

analyses, the first to check for common method variance (CMV), and the second to confirm the consolidation of the two types of crowdfunding: rewards-based and donationsbased. For CMV, we used a marker variable to check for differences between the original creators' CFA and the CMV-adjusted CFA. No significant differences were found between the two (IFI = .952/.943, CFI = .946/.935, RMSEA = .055/.058, respectively). A similar test for the supporters' sample again revealed no significant differences between the original CFA and the CMV-adjusted CFA (IFI = .952/.948, CFI = .947/.944, RMSEA = .052/.052, respectively). Thus, we can conclude that the findings are not likely to be influenced by CMV. Regarding the second issue, we ran two tests to establish whether the analysis could be conducted on an aggregated sample of rewards-based and donations-based separately for the creators' and supporters' respective samples. First, we ran t-tests comparing the survey items between the two types of campaigns. Results yielded no significant differences between rewards-based and donationsbased campaigns for both creators and supports. Second, we ran a pooling based on procedure similar to that of De Wulf et al. (2001) by enforcing equality for each path between the two types of campaigns. Results for the creators showed that 1 of 14 paths was significantly different, and for the supporters, 2 of 20 paths were significantly different, indicating that the two subsamples of rewards and donations-based for each group (creators/supporters) can be used as one.

To test the hypotheses, we carried out a structural equation analysis, controlling for demographics and project attributes (for creators, the campaign type; for supporters, the campaign type and familiarity with the creator). The estimated model fits were satisfactory (Creators $-\chi 2 = 3.19$, df = 2, p > .10, $\chi 2/$

df = 1.59 NFI = .976, CFI = .985, REMSEA = .075; Supporters - χ 2 = 2.185, df = 3, p > .10, χ 2/df = .728 NFI = .987, CFI = 1.00, REMSEA = .00). Tables 2 and 3 present the standardized estimates of the study constructs for creators and supporters.

Our hypotheses posited that communication, bonding, commitment, and trust will be positively linked to campaign success. Our findings show that for creators, while communication, commitment, and trust were perceived important in establishing a community, only commitment appeared to impact the goal-performance ratio. Bonding revealed a surprisingly negative impact on the number of supporters. Further analysis showed an inverted U-shaped relationship between bonding and the number of supporters (β of quadratic bonding = -.289, t = -2.7, p < .01), meaning that efforts from creators to emotionally engage supporters increased the number of supporters up to an optimal point, while additional efforts occasioned a decrease in the number of supporters.

As for supporters, commitment facilitated their perception of active recruitment. However, only bonding appeared to impact the number of supporters, and the number of supporters was the only construct having a positive impact on goal performance ratio.

Overall, all hypotheses were accepted in regard with at least one of the subjective measures of performance (Creators - establishing a community; Supporters – active recruit). Yet, when it came to the objective measurements of campaigns' success, among the creators, bonding showed negative results on the number of supporters, and only commitment demonstrated a positive impact on goal performance. Among the supporters sample, bonding found to be the sole predictor of number of supporters.



Table 2 Standardized estimates - Creators (N = 106)

Construct name	Achieving funding goal (<i>t</i> -value)	establishing a community (<i>t</i> -value)	No. of supporters (<i>t</i> -value)	Goal performance (<i>t</i> -value)
Creators				
Communication	10	.36**	17	009
	(92)	(3.7)	(-1.5)	(08)
Bonding	.12	10	33**	.03
	(1.1)	(-1.1)	(-3.1)	(.23)
Commitment	.11	.20*	.07	$.20^{\dagger}$
	(1.02)	(2.2)	(.66)	(1.8)
Trust	.16	.32**	05	06
	(1.6)	(3.8)	(52)	(61)
Establishing a community			.17 (1.6)	
Control variables:				
Campaign type	19*	09	07	.07
	(-2.0)	(-1.01)	(77)	(.74)
Gender	.14	02	06	.02
	(1.4)	(20)	(71)	(.19)
Age	08	.001	.11	07
	(87)	(.01)	(1.2	(66)
R^2	.11	.34	.20	.08

 $^{^{\}dagger} p < .10, *p < .05, **p < .01$

Supporters' mediation model analysis - while several of the findings aligned with our expectations, our study also produced several unexpected outcomes. The primary surprise outcome relates to communication and its lack of impact on campaign success. Based on previous research (Belleflamme et al. 2014; Frydrych et al. 2016; Kuppuswamy and Bayus 2018), we anticipated a positive impact of communication, yet our findings revealed such an impact only on the construct of establishing a community among the creators sample. Drawing on RM literature, while sellers tend to view the RM constructs as linearly impacting performance with regard to buyers, among buyers, communication's impact is often mediated through commitment and trust (Gilboa et al. 2019; Mukherjee and Nath 2007; Palmatier et al. 2006). Evidence for this mediation can be found in the crowdfunding literature as well. For example, Althoff and Leskovec (2015) showed that creators, when communicating an appropriate and timely recognition of their support, can enhance supporters' commitment and improve their retention. In addition, effective communication was identified as a facilitator of supporters' trust (Song and van Boeschoten 2015) as well as an enhancer of trust in situations of delayed rewards (Kim et al. 2017). Another study found that communication enhances supporters' engagement with the creator (corresponding to both bonding and commitment), which led in turn to active recruitment of additional supporters (Efrat et al. 2019). Therefore, we propose a mediation model based on the supporters' data (for the mediation model, see Fig. 2). The model showed satisfactory indicators ($\chi^2 = 19.166$, df = 17, p > .10, $\chi^2/df = 1.127$ NFI = .885, CFI = .979, REMSEA = .032). Comparing the previous model with the mediation model revealed no significant difference on models' indicators allowing us to proceed with the mediation model. The mediation model is implemented only on the supporters' data, diverging from the creators' model, thus reducing our ability to compare the two groups. Nonetheless, the mediation model allows us to advance our understanding of the supporters' decision-making process and its implications, an issue only scantly addressed by previous research. Therefore, we chose to proceed with the mediation model (see Table 4 for the post hoc findings).

The findings showed that communication had a positive impact on bonding and commitment. In addition, commitment impacted active recruitment, and bonding impacted the number of supporters. Finally, the number of supporters had an impact on goal performance. Figure 2 presents the combined findings of the creators' and the supporters' post hoc analyses.

Discussion

The goal of our study was to explore how the interaction between creators and supporters contributes to crowdfunding's campaigns success. We tested this interaction



Table 3 Standardized estimates - Supporters (N = 128)

Construct name	Active recruitment (<i>t</i> -value)	No. of supporters (<i>t</i> -value)	Goal performance (t-value)	
Communication	.11	17	.11	
	(1.2)	(-1.6)	(1.2)	
Bonding	.11	.32***	.02	
	(1.4)	(3.5)	(.24)	
Commitment	.34**	05	.04	
	(3.6)	(44)	(.35)	
Trust	005	.03	.04	
	(06)	(.36)	(.40)	
No. of supporters				
Control variables:			.39**	
			(4.4)	
Campaign type	03	03	.06	
	(38)	(37)	(.75)	
Familiarity with creator	.05	.02	.13	
•	(.59)	(.23)	(1.4)	
Gender	$.20^{\dagger}$	04	.23*	
	(2.4)	(42)	(2.6)	
Age	21**	04	.14	
-	(-2.6)	(46)	(1.6)	
R^2	.24	.12	.24	

 $^{^{\}dagger}$ p < .10, *p < .05, **p < .01

by employing the building blocks of RM—open and direct communication, commitment, bonding, and trust—as they are viewed by the creators and supporters through their interaction, and how they affect financial and non-financial aspects of campaign success. In doing so, we aimed to expand our understanding of the supporters' role in the crowdfunding ecosystem, linking it to a growing research stream addressing crowdfunding as a marketing tool (Brown et al. 2017).

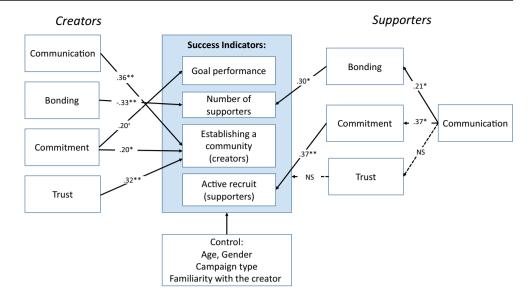
Upon applying RM constructs in the crowdfunding context, the findings revealed differential views among creators and supporters. Creators viewed the use of the RM dimensions mainly for establishing a community of supporters, a long-term indicator of crowdfunding success. This finding aligns with previous findings on the contribution intentions of online communities (Wang and Fesenmaier 2003). Conversely, supporters perceived the RM constructs as process related, based on evolving bonding and commitment, following creator information sharing, which, in turn, led to active support and hence, to improved campaign success rates, both financial and nonfinancial. Thus, the present findings present a comprehensive understanding of the dyadic relationship between creators and supporters, an issue heretofore unexplored.

More specifically, we found that supporters reacted to creator-initiated communication by means of emotional engagement. Once supporters developed a sense of commitment with a campaign, they were more likely to actively recruit additional supporters. These findings demonstrate the growing impact of online customers' recommendations as drivers for loyalty and purchase intentions (Ballantine and Au Yeung 2015). The findings are also consistent with previous research showing that supporters operate as campaign ambassadors, initiating moves that enhance the exposure of the campaign among relevant crowds (Efrat et al. 2019; Gerber and Hui 2013; Rechenberger et al. 2015).

Our findings demonstrate that creators appear to disregard the central role played by the various RM dimensions in establishing relationships with supporters for promoting the campaign's immediate success. Thus, while creators do acknowledge the importance of communication, trust, and commitment, they only do so for establishing a community of supporters. Moreover, bonding was found in the current study to be the key aspect in motivating supporters to become active recruiters. However, creators' efforts to motivate their supporters to become bonded showed positive results only up to a point, with additional creator efforts jeopardizing further recruitment, resulting in diminishing returns. A possible explanation comes from the characteristics of bonding, which is usually associated with smaller groups of individuals. Unlike commitment, which, once triggered, evolves within the individual recipient, bonding requires the interaction between two parties, in our case, creator and supporters. The larger the group of supporters, the more resources creators require to



Fig. 2 Final findings- RM in crowdfunding- Creators and Supporters



facilitate bonding. Since creators operate under resourceconstrained conditions, it is reasonable to assume that the larger the group of supporters, the less efficient would be the effort to achieve effective bonding, a dynamic based on personal relationships. Thus, creators' use of RM dimensions appears to be aimed mostly for the long term, specifically to establish a community. Such a community will serve the creators in achieving success more easily in subsequent campaigns (Inbar and Barzilay 2014), with the immediate campaign being less affected.

Table 4 Standardized estimates - Supporters (post hoc analysis)

Constructs	Bonding	Commitment (t-value)	Trust (t-value)	Active recruitment (t-value)	No. of supporters (<i>t</i> -value)	Goal performance (t-value)
	(t-value)					
Communication	.21* (2.4)	.37* (4.6)	.12 (1.4)			
Bonding				.13	.30*	.04
				(1.6)	(3.2)	(.47)
Commitment				.37*	11	.07
				(4.2)	(-1.0)	(.76)
Trust				007	.02	.03
				(09)	(.33)	(.37)
No. of supporters						.38**
						(4.3)
Control variables:						
Campaign type				04	03	.06
				(45)	(37)	(.74)
Familiarity with				.03	.05	.11
creator				(.34)	(.54)	(1.3)
Gender				.21 [†]	07	.26*
				(2.5)	(79)	(2.8)
Age				21*	04	.14
<u>-</u>				(-2.6)	(46)	(1.6)
Income				.20*	18	08
				(2.0)	(-1.6)	(71)
R^2				.23	.09	.23

 $^{^{\}dagger} p < .10, *p < .05, **p < .01$



Our findings also expand our understanding of the role communication plays in the context of crowdfunding from the perspective of both creators and supporters. While communication was discussed thoroughly in previous findings, it was typically addressed for its direct link with campaign success measures (Gerber et al. 2012; Zheng et al. 2014). The current study follows similar studies in enabling us to view the process through the supporters' lens while seeking an understanding of how communication operates. Whereas communication has some direct impact on campaign success prospects, its main contribution is mediated through eliciting supporter commitment and bonding, both found to have a direct impact on success.

As for trust—we found that while creators made efforts to build trust, these efforts had no impact on campaign success among the supporters. This is surprising, considering the centrality of trust in the RM literature (Agariya and Singh 2011). Trust has been considered to contribute to campaign success by providing the supporter with the added value of a sense of belonging (Belleflamme et al. 2014; Colombo et al. 2015; Gerber and Hui 2013). A possible explanation can be derived from the relatively short time frame (30-45 days) characterizing crowdfunding campaigns, relative to more traditional marketing activities. Trust building is based on repeated experiences, and therefore requires a more substantial period for it to mature (Wilson et al. 2006). It can be assumed that the campaigns' intensity would compensate for the lack of time needed to build trust, but apparently, it does not. However, while trust showed no direct impact, removing it from the statistical analysis weakened the model. This is consistent with previous findings, in that while not all dimensions of RM are expected to have a direct impact on operation outcomes, they are still critical as a whole and thus contribute to the overall influence of RM (Hennig-Thurau et al. 2002).

To conclude, the present endeavor establishes the relevance of RM in the context of crowdfunding as a framework for understanding creator-supporter relations and how they facilitate campaign success. As reflected in the data, creators trigger commitment and bonding by maintaining direct and open communication with their supporters, thus leading the supporters to become active recruiters. Supporters' recruiting efforts are accrued to the creators in the form of social capital, a resource described by the creators as a strong driver for future campaign performance.

Practical implications

As noted, the present study's findings suggest that the success of crowdfunding campaigns relies on the creators' ability to communicate with potential supporters and to build a sense of commitment and bonding with them. Considering the current findings, several implications can be offered. The current findings suggest that creators appear to underestimate the value of establishing a relationship with their supporters to the campaign's success. Thus, we suggest that in planning and

marketing crowdfunding campaigns, creators stress the emotional values embedded in the RM dimensions. For example, in preparing their video, creators should ensure that the content is not only informative, but also advances shared values and emotional sentiment. In the process of determining rewards, creators should focus on the emotional sentiments that the rewards can induce among supporters. Some examples of this technique include a creator's personal note with the name of the supporter or mentioning supporters' names in the online campaign update page. During the running of the campaign, creators should communicate their gratitude toward supporters and encourage them to recruit additional supporters.

Limitations and future research

The presented research has several noteworthy limitations. First, due to the complex nature of the present study, presenting two samples and linking them, RM was rendered in its most basic form. Future research should explore additional aspects of RM, such as the contribution of reciprocity, which has surfaced in previous studies as a relevant factor in the decision of individuals to support campaigns (Zheng et al. 2014), as well as supporters' perceived value of the campaign and how this is influenced by the creators' reliability. Furthermore, the linkage between the various dimensions of RM should be further explored to advance our knowledge regarding synergetic relationships.

Second, the study focused on creators and supporters of rewards-based and donation-based campaigns. This focus was based on three considerations: first, the two types share certain characteristics (e.g., low capital risk, sense of community, and 'helping others fulfill their dreams' motivation), which also distinguish them from the other campaign types (Agrawal et al. 2014). Secondly, due to the small monetary sums required in these types, rewards-based and donationbased platforms face lower levels of regulation and therefore grow rapidly in numbers and volume (Dushnitsky et al. 2016). Last, both types were found to comprise an emotional aspect in the supporters' choice to engage with them (Allison et al. 2015; Davis et al. 2017). While the performed t-tests and pooling tests showed no differences between the rewards and donations data sets with regard to the examined RM constructs, we can speculate that some RM constructs, especially those relating to supporter satisfaction and experience, may be relevant to rewards-based campaigns. Further research should examine the impact of those RM dimensions on supporters' long-term engagement with crowdfunding, beyond specific.

campaigns.

Finally, recent research has initiated a discussion probing supporters' behaviour through the different stages of crowdfunding campaigns' life cycle (Gerber and Hui 2016). Drawing on our conclusions, RM should be further explored in this context, aiming to advance our understanding of how



and when each of the RM constructs is expressed, and what outcomes are manifested at each stage.

Conclusion

The present study explores the interaction between creators and supporters in crowdfunding campaigns and how this interaction affects campaign success while incorporating RM dimensions. The findings revealed that communication initiated by creators triggering commitment and bonding among supporters and transform them into active recruiters of additional supporters. However, we identified a disparity between creators' and supporters' perceptions of the centrality of the RM dimensions in the interaction between them. Creators tend to see their efforts at promoting these dimensions as a tool limited to facilitating community establishment, while in fact, their effect on supporters is manifested in actual fundraising for the current campaign.

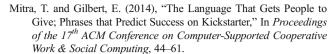
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