

A Comparative Study on the Effect of Environmental Social Value
Statements on Crowdfunding Success Across Various
Crowdfunding Platforms

by

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Submitted in partial fulfillment of the
requirements for Departmental Honors in
the Department of Management, Entrepreneurship, and Leadership
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May 7, 2018

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ABSTRACT

In this study I examine the effects of an expressed sustainability orientation on crowdfunding - performance across crowdfunding platforms. I draw from literature that examines factors of success, including previous studies done on sustainability in crowdfunding. I also draw on literature related to replication of social science research and generalization of findings across crowdfunding contexts. I examined 50 campaigns each from Kickstarter, Crowdcube, and Kiva for a total sample of 150 campaigns. My findings suggest that expressing a sustainability orientation positively and significantly impacts a campaign's chances of success on Kickstarter, but not on Kiva or Crowdcube.

INTRODUCTION

Crowdfunding is 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 relatively large number of individuals using the internet, without standard financial intermediaries” (Mollick, 2013, p. 2). It has been periodically used throughout history as a means to raise capital for important causes. For example, in 1885, Joseph Pulitzer funded the completion of the Statue of Liberty’s pedestal through soliciting investments from the readership of the New York World (Short, Ketchen, McKenny, Allison, and Ireland, 2017). However, due to evolving regulations around the globe, the rise of the internet, and the need for capital beyond traditional means (e.g. VC), both the practice of and the body of research on crowdfunding has been growing. Research has been conducted on factors that influence crowdfunding success (e.g. Mollick, 2014), theoretical explanations of investor motivations across crowdfunding markets (e.g. Heyman and Ariely, 2004), and how traditional investment theories, such as signaling theory, apply to crowdfunding (e.g. Ahlers, Cumming, Günther, and Schweizer, 2015).

More recently, scholars have shown interest in the social value aspects of crowdfunding. Crowdfunding research has indicated that some crowdfunding investors may provide funds for social reasons as well as economic reasons, which suggest entrepreneurs can benefit from expression the social value created by their company (e.g., Cholakova and Clarysse, 2015; Heyman and Ariely, 2004). For example, one research study using Kickstarter data, found that promoting “a sustainability orientation positively affects funding success of crowdfunding projects” (Calic and Mosakowski, 2016, p. 738). While such findings are valuable, it is important to realize that crowdfunding platforms differ in their aims and objectives and investor

motivations are not constant across platforms (e.g. Mollick, 2014; Schwienbacher and Larralde, 2010). As such, although expressing social values may appear to be a key driver of finding in one context, we cannot assume that such expressions generalize to other contexts. Thus, a comparison of rewards-based, equity-based, and lending-based platforms is needed.

Accordingly, this paper seeks to answer the following research question: *how does expressing a sustainability orientation affect campaign outcomes based on the type of platform being used?*

To probe this question, I examine the effect of expressing a sustainability orientation on a new venture's ability to successfully crowdfund on rewards platforms, equity platforms, and lending platforms. Specifically, the paper will be examining 50 campaigns from Kickstarter (rewards-based), 50 campaigns from Crowdcube (equity-based), and 50 campaigns from Kiva (lending-based). All three sampling frames are commonly used in crowdfunding research, thus providing a salient reference point to past research. Perhaps more importantly, it will explore the differences between the platforms and if there are differing results across the types of platforms.

This paper contributes to the crowdfunding literature by using a campaign's expressed sustainability orientation to advance knowledge concerning investor motivations and how those vary based on the platform. In doing so, it answers recent calls by Anglin and colleagues (2018) to investigate how findings of different factors to success (in their case, positive psychological capital) translate across venture financing mediums. In addition, this paper will build on the existing body of research by replicating findings from Calic and Mosakowski (2016), whose findings are discussed above. Replication is important for many reasons: drawing conclusions

based on one or few studies is challenging due to the limitations of those studies, there is a shortage in social science literature due to publisher's and grant provider's interest in new research (Park, 2004). As I will show, replicating a study done on sustainability in crowdfunding is important because of the differing results compared to previous crowdfunding research (cf. Calic and Mosakowski's 2016 study; Hörisch, 2015)r).

This paper will begin with a literature review that will cover the body of research relevant to this topic. It will highlight research on psychology, business, crowdfunding, and sustainability specifically to show the current body of work on the topic. Then, I outline the methods used to collect the data for the research and the results garnered from analyzing the data. I conclude with a discussion of the results that will include general analysis as well as limitations. It will also suggest next steps and where there is room for future studies to improve clarity or break new ground on the topic. There will then be a section outlining the relevant practical implications of the study. Finally, there will be a conclusion that draws the paper to a close.

LITERATURE REVIEW

Background on Crowdfunding

Crowdfunding is an emerging topic that has attracted increased attention of researchers in recent years. Although crowdfunding has been an available form of finance for a number of years, startups can now exploit the capabilities of social networks and other features of Web 2.0 (Hemer, 2011), which has likely contributed to the growing interest in publishing research on the topic. Crowdfunding derived from crowdsourcing. However, an important distinction is that where crowdsourcing is aimed at outsourcing tasks to a large number of individuals (a "crowd of

people”), the main objective of crowdfunding is to obtain money (Hemer, 2011). Broadly, crowdfunding is 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 relatively large number of individuals using the internet, without standard financial intermediaries” (Mollick, 2014, p. 2). The World Bank projects that crowdfunding could account for over \$300 billion in cumulative transactions by 2025 (Hemer, 2011).

A selection of crowdfunding literature examines the topic from the venture perspective. From this perspective, there has been research conducted on what types of organizations might choose to crowdfund, suggesting several reasons for why and when entrepreneurs may choose to crowdfund their ventures. First, the decision to crowdfund is influenced by the potential need for follow-on funding. Second, consumer facing businesses are more likely to crowdfund. Third, those that are sensitive about releasing information will avoid crowdfunding. Finally, those with a focus on social gains are likely to choose crowdfunding (Collins and Pierrakis, 2012). In addition, organizations might choose to crowdfund to reduce costs. By incorporating users into the product design and improvement process, users contribute value to the company. This reduces the length of product development, as well as increases odds of customer acceptance and increasing the perception of product newness (Shwienbacher and Larralde, 2010). Crowdfunding can also be used as proof of concept by providing an indication of whether there will be demand for the product (Shwienbacher and Larralde, 2010). In sum, organizations choose to use crowdfunding to receive both capital and development feedback on their products.

Early crowdfunding research has been focused on the determinants for success across a variety of platforms, and knowledge of these determinants is important to inform how crowdfunding impacts the governance and outcomes of entrepreneurial organizations (Short, Ketchen, McKenny, Allison, and Ireland, 2017). Crowdfunding occurs on a variety of different platforms. There are rewards-based platforms, equity-based platforms, and debt-based platforms (which can be subdivided into those that appreciate interest and those that only return the principle investment). This paper focuses on rewards-based platforms, equity-based platforms, and lending platforms. Therefore the review of literature will focus on papers related to these three types of platforms. The focus on these three types of crowdfunding is driven by the availability of previous research and the value in comparing findings across platforms.

Rewards-Based Crowdfunding

Rewards-based crowdfunding is the most widespread crowdfunding model used by entrepreneurs due to various legal issues surrounding other platforms (Cholakova and Clarysse, 2015). In this crowdfunding model, funders receive a reward for backing a project (Mollick, 2014). For example, campaign backers might receive the product (often as a pre-purchase), a signed or customized copy of a product, or a variety of nonmaterial perks (having one's name on a list of supporters, getting a newsletter update) (Cholakova and Clarysse, 2015).

Certain success factors have been studied on crowdfunding, specifically using a sample of campaigns from Kickstarter. For example, research finds that campaigns generally succeed by small margins or fail by large ones, social capital and preparedness are associated with increased chances of success, geography plays a role in the nature and success rates of projects, and

projects try and deliver rewards in a timely manner, but many fail to do so (Mollick, 2014).

Additionally, a research study has shown that displaying entrepreneurial passion generally leads to a 74% to 92% increase in funding amount on a sample of campaigns from Kickstarter and Indiegogo (Li, Chen, Kotha, and Fisher, 2017). Finally, research indicates that pitches are more likely to receive funding when perceived as creative, and that this is contingent upon the degree to which the funders perceive the entrepreneur as displaying passion (Blakely, Hmieleski, Webb, and Coombs, 2016).

Investor motivations have also been studied, although have received less attention. Such research is rooted in the well-established psychology and motivations literatures (e.g. Andreoni, 1990; Bergstrom, Garratt, and Sheehan-Connor, 2009; Deci, Koestner, and Ryan, 1999). Receiving a reward might not be considered an investment, but to some degree all funders can be thought of as investors – making decisions about which projects to support based on their expectations for success and the underlying appeal of the project (Mollick, 2014). Nonfinancial motives are expected to play a large role in determining an individual’s willingness to pledge on a rewards-based platform (Cholakova and Clarysse, 2015). For example, a study by Anglin and colleagues (2018a) examined positive language and its link to success on campaigns listed on Kickstarter. They found that campaigns that signal positive psychological capital experience better fundraising performance than those that do not (Anglin et al., 2018a). More broadly, this legitimizes the use of costless signals as an effective strategy to increase the chances of fundraising success. In a different study by Anglin and colleagues (2018b), they examined the effect of narcissistic rhetoric on crowdfunding success. The conclusion was that “displays of narcissism are an important driver of crowdfunding performance...however, the impact of

narcissistic rhetoric becomes detrimental to performance when used excessively” (Anglin et al. 2018b, p. 18). The overuse of narcissistic rhetoric likely leads to detrimental effects due to a perception of dishonesty. Both of these studies show that non-financial motives play a significant role in determining outcomes on rewards-based platforms.

Equity-Based Crowdfunding

Equity crowdfunding is the offering of securities by a privately held business to the general public, through a medium of an online platform. This model allows anyone to acquire a share in a privately held business (Collins and Pierrakis, 2012). This definition rules out platforms that restrict the membership to accredited investors, although many early websites may label themselves as ‘equity’ crowdfunding platforms may only allow accredited investors. Such platforms are not considered as ‘equity’ crowdfunding in this review.

Equity crowdfunding has not experienced the growth of rewards-based crowdfunding. This may be because contracts associated with equity crowdfunding are considerably more complex than other types of funding, the due diligence process can be extensive, and high levels of investment generally require the funder to have an intimate knowledge of the entrepreneur and their business before investing (Vulkan, Astebro, and Sierra, 2016). The slow growth has likely led to a smaller body of research on the topic in relation to rewards-based campaigns.

Work has examined success factors for equity campaigns. For example, Ahlers and colleagues studied the “impact of venture quality (human capital, social [alliance] capital, and intellectual capital) and uncertainty on fundraising success”(Ahlers, Cumming, Günther, and Schweizer, 2015, p. 956). They concluded that retained equity and detailed risk information are effective

signals and impact success, whereas social and intellectual capital have essentially no impact (Ahlers et al., 2015). Likewise, Investor motivations have been also studied in equity-based platforms. This research has noted that “If equity backers can be conceived as traditional investors, then we would predict that...their focus on financial return will have the strongest impact on their decisions to invest” (Cholakova and Clarysse, 2015, p. 150). This is not to say that non-financial motives do not matter as well, just that financial motives are expected to be stronger.

Lending-Based Platforms

Lending-based crowdfunding is based on the premise that the platform “[brokers] small credits on a peer-to-peer (P2P) basis...without the involvement of a bank” (Hemer, 2011, p. 16). This means that investors finance loans for entrepreneurial ventures, with some platforms allowing investors to collect interest and some allowing for the return of the principal amount only. This is an important distinction because it changes investor motivations by changing the platform to be more similar to a social market than a capital one. For example, Kiva, the largest lending-based platform focuses on using crowdfunding to finance small loans for poor businesses, largely in low-income countries (Bannerman, 2012), and investors do not collect interest on the loans made.

One of the most widely studied determinants of success for entrepreneurs using lending-based platforms is gender and appearance. One study found that, on a German-based platform, there were no significant differences in the role of gender and funding success (Barasinka and Schafer, 2014). This contrasted an earlier study of the American platform Prosper.com that found

that appearance-based judgements of trustworthiness predicts actual credit outcomes (Duarte, Siegel, and Young, 2012).

Another area of study relates to the entrepreneurial narrative and the impact it can have on success. For example, Allison and colleagues (2015) used a sample of campaigns from Kiva to study how the content of an entrepreneurial narrative influences the attractiveness of the microloan to the investor. This paper sought to show that investors are intrinsically motivated, and that this motivation can be altered by intrinsic and extrinsic cues (discussed in more detail below – but this refers to the fact that an investor is motivated by the action of providing capital in a pro-social environment). The paper concluded that the self-selection into the lending-activity tended to make internal cues more salient in determining the investor's preferences than manipulation of external cues and that lenders respond positively to narratives highlighting the venture as an opportunity to help others, and less positively when the narrative is framed as a business opportunity (Allison, Davis, Short, and Web, 2015). This paper lays groundwork for determining investor motivation when selecting campaigns to microfinance on Kiva, and also legitimizes Kiva as a source from which to draw conclusions on lending-based platforms. A similar paper studies the effect that the entrepreneurial narrative can have on campaign success on Kiva due to the lack of publicly-available information on the campaign. It found that Kiva lenders are more likely to fund ventures that signal autonomy, competitive aggressiveness, and risk taking and less likely to fund ventures that signal conscientiousness, warmth, courage, or empathy (Moss, Neubaum, and Meyskens, 2014). Relational to my current study, these findings could suggest that an expressed sustainability orientation would not necessarily increase the chance of success.

Significant Differences in Rewards-Based and Lending-Based Versus Equity-Based Platforms

There are important differences across crowdfunding platforms. For example, Vulkan and colleagues (2016) note that, compared to other types of crowdfunding, equity platforms have 1) a much higher amount pledged on equity platforms, 2) a much higher average campaign goal, 3) the existence of a (pre-money) valuation, and a clear path for backers to obtain monetary return. In addition, equity-based or non-appreciating lending-based platforms and rewards-based platforms represent two different markets. An equity-based platform could be considered more closely related to a monetary market whereas a rewards-based or non-appreciating lending-based platform could be considered more closely related to a social market. Social and capital markets are the two different markets that can determine the relationship between effort and payment. Specifically regarding motivation, it was found that “when payments [are] given in the form of gifts...or when payments were not mentioned, effort [seems] to stem from altruistic motives...In contrast, when payments [are] given in the form of cash, effort seemed to stem from reciprocation motives and [is] sensitive to the magnitude of the payment” (Heyman and Ariely, 2004, p. 792). Essentially, this states that in the absence of monetary incentive, motivations are driven by different factors than if a monetary incentive is offered. This is the same general premise this paper examines regarding investor motivations across three different platforms (rewards-based and lending-based with no monetary incentive, equity-based with monetary incentive).

Because of the differences across platforms, it is critical that researchers replicate studies done in one context in other contexts.

The non-transferable nature of findings from one crowdfunding context to another is a concept that has received recent attention in the literature. Two recent studies have findings that support the notion that findings are not generalizable. In their study, Dushnitsky and Fitza explore eight different major crowdfunding platforms to better understand how findings might generalize across the different platforms. Their results indicate that “factors associated with success in a given platform do not replicate to the other platforms” (Dushnitsky and Fitza, 2018, p. 1). They call for a need to increase the amount of literature addressing generalizability and complementing single-platform studies with cross-platform studies. Short and Anglin (2019) also looked at the generalizable nature of crowdfunding findings, focusing specifically on rhetoric in a social context as compared to a rewards-based crowdfunding context. In their study, they found “relatively little consistency across contexts underscoring the value replication” (Short and Anglin, 2019, p. 1). This study answers the call of Dushnitsky and Fitza (2018) by exploring the generalizable nature of findings related to sustainability across crowdfunding contexts. This literature lays the ground for this study to not only replicate research done specifically on sustainability, but to replicate the studies above and provide findings regarding the generalizable nature of crowdfunding findings across contexts.

Sustainability Orientation in Crowdfunding

A study by Hörisch (2015) examined Indiegogo –specifically the environmental category. At the conclusion of the study, he found that “surprisingly, no positive connection between environmental orientation and crowdfunding success can be observed” (Hörisch, 2015, p. 636). His study focused on rewards-based crowdfunding exclusively, however, and does not consider differences in different types of crowdfunding. Calic and Mosakowski (2016), in a later study,

have results contrary to those of Hörisch. Their analysis produced two results: “a sustainability orientation positively affects funding success of crowdfunding projects, and this relationship is partially mediated by project creativity and third-party endorsements” (Calic and Mosakowski, 2016, p. 738). This study examined a significant number more campaigns, however focused only on three categories: technology, film, and video. This base of literature lays the groundwork for this comparative study on the difference a sustainability orientation can make rewards-based crowdfunding platform versus an equity-based platform or a lending-based platform.

Furthermore, the existence of contrary findings on the specific topic of sustainability and crowdfunding supports the logic laid forward in the introduction regarding the importance of replication in the social sciences. There is little to no research on expressing a sustainability orientation and the impact on outcome on equity or lending platforms, thus providing an area for this study to add value to the current literature.

RESEARCH METHODOLOGY

Sample

In order to examine the role of expressed sustainability on crowdfunding success, a random sample of crowdfunding campaigns was drawn from three different platforms. Fifty campaigns are from Kickstarter, a rewards-based platform. Kickstarter is one of the largest crowdfunding websites, with over \$4 billion pledged and 157,155 successfully funded projects (Kickstarter, 2019a). All projects were collected from the “Just Launched” section of the website and concluded between August 2018 and February 2019. The second platform that fifty campaigns were collected from is Crowdcube. This platform is equity-based. 630 successful raises have taken place since 2011 and over €390 million pledged in that period (Crowdcube, 2019a). The campaigns selected ended between August 2018 and February 2019. The final platform used to collect data is Kiva, a lending platform that does not offer interest. The 50 Kiva campaigns occurred between March 2017 and April 2017 and were collected from Kivatools.com. In total, the sample is random and consists of 150 campaigns collected recently from 3 separate platforms, representing a current and comprehensive view across various platforms.

Dependent Variable

In accordance with previous crowdfunding research, the key dependent variable in this study is whether the projects funding goal was met. All three platforms operate very similarly in the way that funding is all-or-nothing. On Kickstarter, a goal is set at the beginning of the campaign and if the funds are not raised before completion any pledges are returned to the investor and the entrepreneur does not receive any funds (Kickstarter, 2019b). On Crowdcube, if

a company fails to raise the goal amount of capital by the deadline, they may either be granted an extension or the pitch will be canceled and no money taken from investors (Crowdcube, 2019b). On Kiva, if a loan is not successfully funded, no money will be taken from lenders who have pledged their funds (Kiva, 2019). If the campaign ended and the funds raised surpassed the goal, a value of ‘1’ was assigned to the *success* variable. If funds raised were less than the target, a value of ‘0’ was assigned.

Independent Variable

Expressed sustainability was measured by manually reading the campaign for mentions of sustainability. Examples of expressed sustainability include the following (taken from campaigns analyzed in the data set collected):

“funds raised from this Kickstarter will enable us to partner with a domestic manufacturer that can produce games of high quality and low carbon footprint. We want to do right by the beautiful environment that inspired this game!” – Trailhead

“Exceedence has created a software solution with the ability to make technical and financial decisions faster, more transparent and robust thus helping fast-track investment in renewables.” – Exceedence (Crowdcube, 2019c)

The above represents two examples of what was considered to be expressed sustainability. Each campaign was analyzed as if it were being vetted as an investment, and if it had any expressed sustainability, the sustainable variable was coded 1. If not, the sustainable variable was coded 0.

Moderating Variable

The success of expressed sustainability is being studied across three separate platforms, each of which attracts different types of investors who are investing with different motivations. Therefore, each platform has the potential to influence the likelihood that sustainability is expressed and the effect the expression could have on success. Campaigns from Kickstarter were coded with a 0, campaigns from Crowdcube were coded with a 1, and campaigns from Kiva were coded with a 2 in the platform variable.

Controls

Building on the previously generated body of crowdfunding literature, several variables were chosen as controls in this experiment. All the variables have been previously linked to crowdfunding success. The presence of a *video* (video = 1 ; no video = 0), *team size* (coded with the number of team members i.e a team of four = 4), and *target amount* (monetary value of the goal) are the variables that are controlled for in this study. Because team size and target amount are skewed, we take the natural log of these variables to normalize them.

Statistical Procedures

Our dependent variable is dichotomous, therefore, we use logistic regression to estimate the models in this study. This allowed for an analysis of how an expressed sustainability orientation impacts crowdfunding success, while removing bias that would be present in other statistical methods of analysis, such as OLS. We estimate our models in two ways. First, we estimate one model for each sample to determine the direct influence of sustainability orientation on success in each context. Second, we use platform type as a moderator to explore differences

between platforms. Due to the sample size, bootstrap errors were utilized in calculating the standard error. Coefficients are expressed as log odds.

RESULTS

The data set was analyzed in two different ways. Each platform (Kickstarter, Crowdfunder, Kiva) was analyzed independently to determine the effect an expressed sustainability orientation had on success. Then, the platforms were combined into one sample to determine the effect an expressed sustainability orientation had on success and how that differed by platform-type (the moderating effect of the platform). Within each sample, the data was run with a controls-only group, and then run again including the expressed sustainability orientation.

Results of Individual Samples

Descriptive statistics for the Kickstarter sample are provided in Table 1. In Table 2, the results from the rewards-based platform indicate that expressing a sustainability orientation has a statistically significant positive effect on a campaign's chances of success ($b = 1.29, p = 0.06$). Additionally, when including the sustainability orientation category, the model improved in fit (measured by log-likelihood).

Kickstarter							
Descriptive Stats							
Variable	Mean	Std. Dev.	Success	Video	Team Size (ln)	Target Amount (ln)	Expressed Sust. Orientation
Success	0.66	0.48	1.00				
Video	1.92	0.27	0.26	1.00			
Team Size (ln)	0.55	0.91	0.27	0.18	1.00		
Target Amount (ln)	9.41	1.54	0.05	0.05	0.23	1.00	
Expressed Sust. Orientation	0.26	0.44	0.23	0.17	-0.03	-0.07	1.00
Correlation with an absolute value of 0.28 and 0.24 are significant at 0.05 and 0.10, respectively							

Table 1: Kickstarter Descriptive Statistics

Kickstarter Results		
Variables	Controls	Main Effect
Video	1.57 ⁺	1.23 ⁺
Team Size (ln)	0.81 [*]	0.87 [*]
Target Amount (ln)	-0.03	0.01
Expressed Sust. Orientation		1.29 ⁺
Constant	-2.43	-3.75
Log	-28.87	-27.61
N	50	
* = significant at p = 0.05		
+ = significant at p = 0.10		

Table 2: Kickstarter Statistical Results

Descriptive statistics for the Crowdcube sample are provided in Table 3. In Table 4, the results from the equity-based platform indicate that expressing a sustainability orientation has a statistically insignificant positive impact on a campaign's chances of success ($b = 0.28$, $p = 0.74$). The model improved slightly in fit as measured by the log-likelihood. It is important to note that the presence of a video was implicitly controlled for, as every campaign analyzed displayed a video.

Crowdcube							
Descriptive Stats							
Variable	Mean	Std. Dev.	Success	Team Size (ln)	Target Amount (ln)	Expressed Sust. Orientation	
Success	0.38	0.49	1.00				
Video	1.00	0.00					
Team Size (ln)	1.37	0.39	0.00	1.00			
Target Amount (ln)	12.53	1.00	0.18	0.06	1.00		
Expressed Sust. Orientation	0.24	0.43	0.04	-0.08	-0.07		1.00
Correlation with an absolute value of 0.28 and 0.24 are significant at 0.05 and 0.10, respectively							

Table 3: Crowdcube Descriptive Statistics

Crowdcube Results		
Variables	Controls	Main Effect
Team Size (ln)	-0.06	-0.03
Target Amount (ln)	0.39	0.40
Expressed Sust. Orientation		0.28
Constant	-5.32	-5.82
Log	-32.36	-32.28
N	50	
* = significant at p = 0.05		
+ = significant at p = 0.10		

Table 4: Crowdcube Statistical Results

Descriptive statistics for the Kiva sample are provided in Table 5. In Table 6, the results from the lending-based platform indicate that expressing a sustainability orientation has a statistically insignificant, negative impact on a campaign's chances of success ($b = -5.93$, $p = 0.18$). It is important to note that the presence of a video and team size were both implicitly controlled for in the Kiva sample, as no sample had a video and team size was 1 for every campaign analyzed. While estimating the logistic models for the *success* variable, I ran into separation issues. In a logistic regression, separation occurs when a variable perfectly predicts the dependent variable. Failing to correct for this separation issue could lead to biased parameter estimates and model misspecification (Anglin, 2018a). In order to minimize bias, the Firth method of penalized maximum likelihood estimation was utilized for this logistic model (Firth, 1993).

Kiva Descriptive Stats					
Variable	Mean	Std. Dev.	Success	Target Amount (ln)	Expressed Sust. Orientation
Success	0.92	0.27	1.00		
Target Amount (ln)	6.24	0.87	-0.14	1.00	
Expressed Sust. Orientation	0.30	0.46	-0.45	-0.22	1.00
Correlation with an absolute value of 0.28 and 0.24 are significant at 0.05 and 0.10, respectively					

Table 5: Kiva Descriptive Statistics

Kiva Results		
Variables	Controls	Main Effect
Target Amount (ln)	-0.54	-2.49
Expressed Sust. Orientation		-5.93
Constant	5.71	28.34
Penalized Log	-12.22	-6.40
N	50	
* = significant at p = 0.05		
+ = significant at p = 0.10		

Table 6: Kiva Results

Results of Combined Sample

Descriptive statistics for the combined sample are provided in Table 7. In Table 8, the results show that the main effect for expressed sustainability orientation is slightly negative but not significant ($b = -0.01$, $p = 0.98$). I then computed the interactions of expressed sustainability orientation with platform type, using Kickstarter as the excluded category. The interactions are as follows: expressed sustainability orientation X Kiva, $b = -2.37$, $p = 0.33$; expressed sustainability orientation X Crowdcube, $b = -4.38$, $p = 0.01$. These results suggest that compared to Kickstarter, expressed sustainability orientation negatively impacts funding success in Kiva. Due to a separation issue similar to the one encountered in the Kiva model, Firth's method of correction was again utilized to determine model fit.

Combined Sample Descriptive Stats								
Variable	Mean	Std. Dev.	Success	Video	Platform Type	Team Size (ln)	Target Amount (ln)	Expressed Sust. Orientation
Success	0.65	0.48	1.00					
Video	1.64	0.48	-0.34	1.00				
Platform Type	2.00	0.82	0.22	-0.78	1.00			
Team Size (ln)	0.64	0.80	-0.22	0.60	-0.28	1.00		
Target Amount (ln)	9.40	2.83	-0.40	0.78	-0.46	0.69	1.00	
Expresses Sust. Orientation	1.27	0.44	0.03	-0.02	0.04	-0.06	-0.09	1.00

Correlation with an absolute value of 0.17 and 0.13 are significant at 0.05 and 0.10, respectively

Table 7: Combined Sample Descriptive Statistics

Combined Sample Results		
Variables	Controls	Main Effect
Video	-0.36	-0.36
Platform Type	0.14	0.14
Team Size (ln)	0.27	0.26
Target Amount (ln)	-0.32*	-0.32*
Expressed Sust. Orientation		-0.01
Constant	3.93	3.92
Penalized Log	-76.37	-75.52
N	150	
* = significant at p = 0.05		
+ = significant at p = 0.10		

Table 8: Combined Sample Results

Interactions (as compared to Kickstarter)	
Variables	Main Effect
Video	1.00
Team Size	1.36
Target Amount (ln)	0.33
Expressed Sust. Orientation	1.36
Equity	-2.16
Lending	2.94
Sustainability X Equity	-0.81
Sustainability X Lending	-2.55*
Constant	-0.98
Penalized Log	-64.59
N	150
* = significant at p = 0.05	
+ = significant at p = 0.10	

Table 9: Combined Sample Interactions

DISCUSSION

The above results are interesting in a few ways. First, in regards to the Kickstarter study, the results show that expressing a sustainability orientation can increase a campaign's chances of successfully raising capital. This finding supports previous research done by Calic and Mosakowski, while differing from results achieved by Hörisch. This once again shows the importance of replication in social science research and lays the groundwork for future studies to expand the findings of this paper and confirm or deny their legitimacy across a larger sample

size. The Kickstarter study models also improved in fit when an expressed sustainability orientation was included, suggesting that it is wise to include this observation when trying to predict a campaign's chances of success or crafting a campaign.

The equity-based findings conclude that expressing a sustainability orientation has essentially no impact on a campaign's chances of successfully meeting their funding goals. This is in line with previous research from Cholakova and Clarysse showing that investors on equity-based platforms are financially-motivated above all else. This finding further underscores the concerns raised by previous crowdfunding work concerning the generalization of a finding in one crowdfunding context to another (e.g., Short and Anglin, 2019).

The lending-based findings conclude that expressing a sustainability orientation has an insignificant negative impact on chances of success. However, when compared to Kickstarter, expressing a sustainability orientation has a significant negative impact on the campaign's chances of successfully meeting its funding goal. This research correlates to previous findings from Moss, Neubaum, and Meyskens concluding that campaigns that signal conscientiousness, warmth, courage, or empathy are less likely to be funded. Sustainability is closely linked to conscientiousness, therefore these results are loosely in-line with previously conducted research.

When combined, the study suggests that the chances of success when expressing sustainability is not a generalizable result across platform types. It was shown to be positively linked to success in Kickstarter. When Kickstarter was used as the comparison platform, Crowdcube showed no significant impact with regards to sustainability. However, Kiva showed

that expressing a sustainable orientation had a negative and significant impact when compared to Kickstarter. This finding supports those of Dushnitsky and Fitz and Anglin and Short, and proves the value of replication and extension studies in crowdfunding literature.

LIMITATIONS

There are limitations that need to be addressed regarding the above results and statistical analysis. First is sample size. Due to time-constraints, the sample size is small compared to many other studies conducted in crowdfunding research. Second, there are many other controls that could have been considered when measuring crowdfunding success. For example, one is the word-count of the campaign, which has been proven to be correlated with success. Due to the nature of Crowdcube's campaign failure policy (the campaign is removed from the website following the failure to reach it's goal within the predetermined time limit) and the data-collection methodology, word count was not a feasible control variable. A third limitation is investor motivations, which were implied from other research instead of directly addressed by this study. A fourth limitation is the measurement used for expressed sustainability orientation. Due to variety of different ways for a campaign to express sustainability and the smaller sample size, each campaign was manually analyzed for expressed sustainability. Examples above list ways a campaign could have been identified as expressing a sustainability orientation, but a more objective measure would make the study easier to replicate for future research. I recommend that in the future, a list of key-terms is compiled and a campaign's narrative is analyzed for the presence and volume of these key terms. This would act to remove any subjectivity from the measurement and allow for easier replication on subsequent research.

PRACTICAL IMPLICATIONS

This study has implication past those concerning academic research. For any entrepreneur looking at raising capital via crowdfunding, the insights derived from this study can inform how an entrepreneur crafts their narrative. On Kickstarter (or other rewards-based platforms) an entrepreneur should consider expressing a sustainability orientation if their venture has any sustainable implications due to the positive and significant correlation to success. However, if an entrepreneur wants to raise capital on Kiva (or other lending-based platforms) they should more carefully consider expressing their sustainable orientation as it was shown to have a negative impact on success as compared to Kickstarter. On Crowdcube (or other equity-based platforms), an entrepreneur could decide either way with no correlation to success based on the findings of this paper. If the venture is sustainable, the entrepreneur could also consider switching the type of platform they are choosing to raise capital on to one that has been shown to be positively or neutrally correlated with success.

CONCLUSION

This study sought out to answer the following research question: *how does expressing a sustainability orientation affect campaign outcomes based on the type of platform being used?* Sustainability is a topic that many businesses are starting to grasp the importance of embracing. Concerns have moved past simple financial returns, and there is often question regarding the triple bottom line: people, profits, and planet. As the sustainability movement has grasped the established corporate world and companies are creating programs and forming partnerships to prove to consumers that the environment is important to them, I wanted to explore how this trend impacted crowdfunding. Each type of platform appeals to investors with different motivations

(capital versus social markets), thus each platform was shown to have a different outcome at the conclusion of this study.

On Kickstarter (or other rewards-based platforms), an expressed sustainability orientation matters to potential investors and can have a material impact on the chance's that a venture reaches it's funding goal. This should inform entrepreneurs looking to crowdfund on a rewards-based platform to verbalize any sustainable aspect of their venture. On Crowdcube (or other equity-based platforms), expressing a sustainable orientation was shown to have essentially no positive or negative effect on success. Entrepreneurs looking towards equity-based platforms should focus more on expressing parts of their venture that have been proven to correlate with success on these platforms and can choose whether to mention sustainability without fear of failing to reach their goal or confidence that this expression will help them succeed. Kiva (or other lending-based platforms), when compared to Kickstarter, showed a negative correlation to success. Entrepreneurs crowdfunding on lending-based platforms should carefully consider whether to devote much of their entrepreneurial narrative (if any) to the sustainable aspects of the venture.

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