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Enhancing Efficiency of Crowdfunding Campaign Financing:
The Role of Search Engine Optimization and Social Media

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ABSTRACT

This study aims to investigate the impact of off-page communication factors on success of crowdfunding campaigns. While previous research mainly focused on on-page communication factors, relevant research on the impact of off-page communication factors related to additional website visibility and external social media remains scarce. To address this gap, the authors examine the impact of search engine optimization (SEO) actions taken on an additional website and explore influence of the use of external social media on rewards-based crowdfunding success, as it is argued to be the dominant online model. They perform a cross-sectional study of a randomized sample of 1,791 campaigns on KissKissBankBank, the major crowdfunding platform in Europe. The results reveal that (1) SEO actions taken on the additional website enhance success of the crowdfunding campaign, and (2) there are important connections between the use of external social media and success of crowdfunding campaigns. Taken together, these results contribute to adequate decision making among project initiators, backers, and platforms owners.

KEYWORDS

Decision-Making, Off-Page Communication Factors, Rewards-Based Crowdfunding, Search Engine Optimization, Social Media

INTRODUCTION

As of 2021, the total worth of the global crowdfunding market amounted to $13.64 billion, by 2028 it was predicted to grow to approximately $28.92 billion, in a compound annual growth rate of 11.2%.[1] The success rate of projects fully completed through the Kickstarter crowdfunding platform in 2023 was about 40.34%. Overall, $6.72 billion were used to successfully launch projects with crowdfunding.[2]

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This growth in the use of crowdfunding (Xie et al., 2019) is associated with an increase in the practical importance of Fintech. The relevance of connecting people through digital tools and the development of Web 2.0 were at the center of this approach. In fact, crowdfunding goes beyond the use of traditional financial intermediaries (Belleflamme et al., 2014; Mollick, 2014). Rather, it enables project initiators to use an open call, over the crowdfunding platforms (Koch & Siering, 2019), to collect various tiny individual financial contributions from a large pool of participants (Mollick, 2014) referred to as backers.

In the context of the growing importance of crowdfunding and its multiple web-based platforms such as Kickstarter, GoFundMe, KissKissBankBank, and Indiegogo, previous studies have examined the drivers of crowdfunding campaign success. The available research highlights the improvement of the on-page communication factors cannot be overestimated. Factors such as text description (Kuo et al., 2020; Zhou et al., 2018), progress cue (Lee, 2021), videos and photos (Kunz, 2016), contact information (Sokolova & Perez, 2018), and updates and comments (Lai et al., 2017), determine on-page key success through attracting more backers, which can lead to better funding of projects.

Evidence indicates that in order to win interest and trust of the audience, text descriptions frequently seek to elicit emotions through the use of emotion words (e.g., thankful, excited, etc.) (Mitra & Gilbert, 2014). Another important on-page key crowdfunding success driver is the use of stative verbs that express emotions (e.g., to have, hope, promise, etc.) (Lai et al., 2017). In project descriptions, decisive elements are the selected writing style, language, and narrative (Kunz, 2016; Mitra & Gilbert, 2014; Zheng et al., 2014), as all these elements influence campaign success. As argued by Mitra and Gilbert (2014), backers' interest is very likely to be strengthened by an emphasis on the rarity of the product at stake. The length of text descriptions usually ranges between 550 and 5000 words and includes on average six graphics (Koch & Siering, 2015). And there is evidence that funding success increases with every 1% increase in the length of text descriptions (Zhou et al., 2018).

As noted by Sokolova and Perez (2018), along with monetary needs of a campaign, it is equally important to describe future expenses associated with the fund, as this improves the transparency of a project to its backers (Koch & Cheng, 2016). Similarly, in order to emphasize credibility of a project, contact information should be provided in its description, such as an email address or links to an additional website (Sokolova & Perez, 2018).

One more element that supports project description is a presentation video. Previous research revealed that campaigns that do not use presentation videos have a 30% lower chance of success and campaigns of those who do increase by 50%.[3] For a video to be effective in generating empathy and contributors' membership, the pitch must be motivating and professional (Koch & Cheng, 2016; Kunz, 2016; Sokolova & Perez, 2018). There is evidence suggesting that showing project initiators in the video creates a relationship of trust and elicits a feeling of a direct connection to the project. Likewise, exposing the project's prototype creates a feeling of trust (Kunz, 2016) and contributes to strengthening team communication and maintaining the relationship between backers and the project team (Koch & Cheng, 2016).

Previous studies revealed a strong positive link between frequency of project updates on the crowdfunding platform, on the one hand, and the number of donations, average amount of donations, and total success of crowdfunding projects on the other hand (Beier & Wagner, 2015). Typically, a project would have an average seven updates during its campaign (Joenssen et al., 2014). The number of backers, as well as the amount of comments in the FAQ, blog, and comment spaces associated with the project (Gutsche & Sylla, 2018) all appear to be decisive factors in determining whether the project has a chance of success (Kraus et al., 2016).

However, crowdfunding platform webpages are conventionally designed following a generic template, which results in a standardized presentation of projects. Limited in their actions of communication, project initiators prefer to present new content (e.g., video, photo, audio) and further information with an individualized and personal design through other channels such as an additional

website or external social media (Beier & Wagner, 2015). These off-page communication factors are related to the external environment of the project outside of the crowdfunding platform.

To the best of our knowledge, none of the previous studies has investigated the relationship between search engine optimization (SEO) of the additional website and the crowdfunding campaign success. To fill this gap in the literature, in the present study, we consider a wide range of these external off-page communication factors to explore the success of rewards-based crowdfunding, which was argued to be the dominant online model (Mollick, 2014; Wang et al., 2018) and "the dominant type and particularly relevant for entrepreneurial firms" (Clauss et al., 2020, p. 5). Specifically, our aim is to examine the effect of these factors on success of rewards-based crowdfunding campaigns. These off-page communication factors range from additional websites, including visibility on search engines and user experience, to the use of external social media. Therefore, we ask the following research question: "What is the impact of off-page communication factors on success of crowdfunding campaigns?"

A cross-sectional study of a randomized sample of 1,791 campaigns was performed on KissKissBankBank, the most popular French rewards-based crowdfunding platform. Our two main findings can be summarized as follows. First, we find that, in terms of SEO, all actions taken on an additional website belonging to the project increase success of crowdfunding campaigns. Second, we observe several important links between the use of external social media and success of crowdfunding campaigns.

The present study contributes to the existing literature in three important ways: (1) our results contribute to the growing body of evidence on the importance of drivers of crowdfunding campaign success, (2) the present study bridges the gap between off-page communication factors and success of rewards-based crowdfunding campaigns, and (3) our findings provide meaningful insights into the relationship between SEO actions and success of crowdfunding campaigns.

From an applied perspective, our results presented in this study help to enhance efficiency of crowdfunding's financing and facilitate managing of corresponding decisions made by project initiators, crowdfunding platform owners, and backers. Since most project initiators are typically poorly informed about the importance of the factors that can lead to success in raising funds, our results make project initiators more aware of the need to use success drivers before launching their campaigns. Also, through offering some insights and reminders about relevant success drivers of crowdfunding campaigns, especially for those applying the "all-or-nothing" model, our findings are also relevant for crowdfunding platform owners. Further, our findings are informative for the crowd of backers in their information seeking and decision making about crowdfunding projects.

The remainder of the paper is structured as follows. We outline the theoretical background and formulate hypotheses to be evaluated, then we describe the methods used. This is followed by reporting the empirical results and a discussion. Finally, we draw our conclusions in the last section.

LITERATURE REVIEW

Crowdfunding: Definition and Relevant Theories

The concept of crowdfunding lies at the intersection of microfinance and crowdsourcing. In contrast to microfinance, which is defined as microcredit intended for people with little income, crowdsourcing refers to the process of outsourcing assignments to firms or external people (Kleemann et al., 2008; Kuppuswamy & Bayus, 2013). Crowdfunding appeared during the 2008 global financial crisis (Jiang et al., 2020) and allows project initiators to launch an open call over the crowdfunding platforms (Schwienbacher & Larralde, 2010). The purpose is to raise funds from a large pool of individuals (Mollick, 2014), also referred to as backers, who are willing to invest small financial contributions into the project. Crowdfunding platforms typically operate on a commission-based model, taking a percentage of the funds raised as their fee. Overall, there are four categories of crowdfunding (Liang et al., 2020). First, in "patronage-based" crowdfunding, which is the most widely used model, backers do not expect direct return from their donations (Clauss et al., 2020). Second, "lending-based"

crowdfunding, backers wait for return rates based on their investment on the firm's capital. The third type is "rewards-based" crowdfunding, where the backers receive a reward for supporting the project (Schwienbacher & Larralde, 2010). Finally, the fourth type of "equity-based" crowdfunding where backers, also referred to as called investors, are given a percentage of their startup shares (Kraus et al., 2016; Mollick, 2014; Schwienbacher & Larralde, 2010).

Crowdfunding models can be broadly categorized into two major types. There is the "all-or-nothing" model where a predetermined starting funding objective must be met or exceeded. If this does not happen, the amount raised will be returned to backers (Belleflamme et al., 2015). This presupposes that project success should be approved by "wisdom of the crowds" (Mollick & Nanda, 2016). Accordingly, backers would invest their money only in a project approved by a certain critical mass (Clauss et al., 2020). The second type of crowdfunding model is "keep-what-you-get," which allows project initiators to retain all raised funds within a specific period of time (Clauss et al., 2020; Moritz & Block, 2016).

Previous research revealed that one of the major factors of crowdfunding failure is information asymmetry (Ahlers et al., 2015). Traditionally attributed to growing credit market failure, information asymmetry refers to a lack of knowledge from lenders about the quality of borrowers or when lenders are concerned about borrowers' propensity behavior. Asymmetric information is the foundation of signal theory (Jiang et al., 2020), which is an economic theory that suggests that individuals base their decisions on the information at hand. According to signaling theory (Kunz et al., 2017), the behavior of one party is attributed to other parties' information access and to how they communicate and analyze that information (Ross, 1977; Spence, 1973). Therefore, effective information communication between project initiators and backers helps to promote success of crowdfunding campaigns (Belleflamme et al., 2014; Davies & Giovannetti, 2018; Kromidha & Robson, 2016; Lagazio & Querci, 2018; Petitjean, 2018). Indeed, project initiators or entrepreneurs may use specific signals or cues to educate potential backers of the caliber of their project or business venture. These indicators could be past achievements, endorsements from influential individuals or organizations, or the usage of premium supplies or tools. If investors believe that these signs point to a high-quality project, they may be more inclined to donate to a crowdfunding campaign. For instance, Agrawal et al. (2014) suggest that quality signals, such as the use of high-quality video or the inclusion of endorsements from influential individuals or organizations, increased the likelihood that a crowdfunding campaign would be successful. Similar findings were made by Kuppuswamy and Bayus (2018), who found that using social proof such as the quantity of backers or the amount of money raised was an excellent way to indicate the quality of a crowdfunding project.

As posited by social capital theory, social relationships are resources that can lead to the development and accumulation of human capital, defined as "the sum of the actual and potential resources embedded within, available through, and derived from the social contacts of an individual or an organization" (Nahapiet & Ghoshal, 1998, p. 243). Several previous studies that explored the role of social capital in success of crowdfunding projects (see, e.g.,Clauss et al., 2020) found it acts as a channel for a more effective and widely diffusion of project ideas (Reagans & McEvily, 2003). For instance, Bi et al. (2017) found that the number of "likes" received is directly proportional to positivity signals sent to backers about the quality of the project. This evidence highlights the importance of using social media and the creation of new project-specific networks to send a credible and valuable signal and reach potential backers (Jiang et al., 2021).

Social identity theory is also related to crowdfunding. According to this theory, individuals develop their self-identity through the groups they are associated with. Individuals are more inclined to donate to a crowdfunding campaign if they identify with the community that is linked to the project. For instance, Mollick (2014) highlights that successful crowdfunding campaigns focused on the social identity of the project creator, such as their upbringing or membership in a certain group. Similar findings were made by Belleflamme et al. (2014), who found that successful initiatives were more likely to have a bigger percentage of contributions from the project creator's social network.

Agency theory suggests that individuals make decisions that are in their own best interests. According to this theory, project initiators or entrepreneurs may have different motivations and objectives than backers in the context of crowdfunding. Investors may be focused on maximizing returns, however the entrepreneurs may be focused on maximizing the success of their project. This could lead to conflicts of interest between initiators and backers. On the other side, Mollick (2014) suggests that agency issues may not be a significant factor in crowdfunding success. Thus, the literature review provided mixed evidence for the role of agency concerns.

Off-Page Communication Factors of Success of Crowdfunding Campaigns

Unlike on-page communication factors, which are intrinsically related to a crowdfunding platform's project webpage, off-page communication factors are related to the campaign project environment outside of the crowdfunding platforms. In this study, we focus on the following two categories of off-page communication factors. First, we analyze factors related to the use of external social media. Second, we consider factors linked to an additional website that increases visibility of a project. There is evidence that campaigns that do not use external social media platforms in and links to an additional website, have a substantially lower probability of success (Müllerleile & Joenssen, 2015).

The Role of Social Media

In order to publicize projects and find a sufficient number of potential backers to reach specific fundraising goals, crowdfunding project initiators largely rely on social media platforms. In recent years, social media have established themselves as platforms for real-time information sharing, events, opinion sharing, and advertising (Lu et al., 2014). Accordingly, social media play an important role in crowdfunding campaigns (Jiang et al., 2021). For instance, they help to attract additional potential investors (Lukkarinen et al., 2016; Song & Van Boeschoten, 2015) and also increase interest in crowdfunding campaigns (Zheng et al., 2014). Social media have been extensively used to create a presence on the Internet before the start of a campaign (Angerer et al., 2017; Müllerleile & Joenssen, 2015). Of note, promotion of a crowdfunding campaign requires attracting investors from different social communities through various social media channels (e.g., Facebook, LinkedIn, Instagram, and Twitter). As argued by Mollick (2014), in crowdfunding, social media are the initial source of funding used by project initiators. It is equally important that donors promote a campaign on social media (Sokolova & Perez, 2018). Before investing in a project, potential backers use their social media to find out which projects they would like to back and ask for returns to their communities (Thies et al., 2014). Based on this evidence, we hypothesize that backers having a social media account (e.g., Facebook, LinkedIn or Twitter) would have a positive impact on success of a crowdfunding campaign project. The following hypothesis can be formulated:

H1. Social media positively impact success of a crowdfunding campaign.

The more developed a given project's campaign network and community are, the more likely a project is to acquire the required funds (Kromidha & Robson, 2016; Mollick, 2014). It is crucial for initiators to maintain a good community by regular and active posting. Previous research revealed that the number of Facebook posts is a good predictor of success of a campaign (Q. Zhang et al., 2017). Responses and engagement are equally important however; a large number of Facebook posts does not necessarily lead to a response from the crowd (Nevin et al., 2017) So, responses and engagement are equally important. Based on these considerations, we hypothesize the following:

H2. The number of posts on social media impacts success of a crowdfunding campaign.

As project initiators use social media to communicate their identity, potential backers will begin to respond; for instance, in the form of Facebook reactions such as the number of "likes" (Nevin et al., 2017). The herding effect of Facebook activity drives a surge of traffic to projects, increasing their chances of success. Indeed, there is evidence that the number of "likes" has a large and favorable impact on successful crowdfunding campaigns (Jin et al., 2020). Interestingly, Facebook "likes" have important temporal effects that are neither linear nor constant. Specifically, a sufficiently large number of "likes" can have a significant impact. Accordingly, crowdfunding has predictably spawned a new form of business that packages and sells Facebook "likes" and other related social media activities. However, as argued by Wessel et al. (2016), these tasks may not provide significant value for a company. While, in stronger competition contexts, some project initiators can be tempted to use fake "likes" to influence their consumers' decision-making; the corresponding positive effect on the number of backers can be very short-lived. In addition, most project initiators who obtain non-genuine "likes" early in the campaign's life cycle are unable to collect above-average money later on. Since "likes" are part of Facebook reactions, the following hypothesis can be formulated:

H3. The number of reactions on social media has a positive impact on success of a crowdfunding campaign.

The Role of an Additional Website

Overall, there is evidence suggesting that projects that do not have their own website have a significantly lower probability of success (Müllerleile & Joenssen, 2015). Accordingly, a campaign has to have an online presence through an additional website presenting their expertise and products' characteristics (Beier & Wagner, 2015).

Customers today, potential backers, extensively use search engines to find projects that meet their requirements. In this context, visibility of websites has become an essential element that helps projects achieve their target audience. A company can barely reach its customers without owning a website visible on search engine results pages (Sagot et al., 2018). To be visible on the Internet, a website has to be present in the search engine results and, ideally, occupy the top positions because information overload has made present-day consumers highly selective (Herbig & Kramer, 1994). A previous study revealed that only 5% to 10% of Internet users would consult the second page of search engine results (Chuklin et al., 2013). And most customers would reformulate their query, rather than look at other result pages. In order to improve the visibility of their websites, the owners can apply search engine optimization (SEO). By using some techniques touching the source code and the website environment, SEO permits a ranking improvement. The final goal here is to attract backers through generating new contacts and qualified traffic by promoting product expertise and technological innovation. The SEO performance of a website could be evaluated according to a set of criteria. First, there are criteria related to the website content, such as the number of words that could have an impact on the position of the additional website on search engines. Previous research revealed that long webpages with a high volume of content have a better chance of being ranked in the top 10 search engine results (Portier et al., 2020). Another important parameter that has an influence on success of a crowdfunding campaign is the word count in the project's description (Xiao & Yue, 2018; Zhou et al., 2018). Based on the evidence discussed above, the following hypothesis can be formulated:

H4. The number of words of an additional website positively impacts success of a crowdfunding campaign.

Along with criteria related to the website content, equally important are criteria linked to the structure and source code. For instance, the website has to include some HTML tags, such as

<TITLE> tag, <META DESCRIPTION> tag, and <Hn> tags. The <TITLE> tag should contain between 60 and 70 characters, while the <META DESCRIPTION> tag should have between 160 and 170 characters (Sagot et al., 2014, 2015, 2016). The <Hn> tags should structure the content (e.g., H1 tag for the title, H2 tag for the subtitle, etc.). This is used on a webpage to indicate the level of importance of text. The highest level is H1, followed by H2 up to H6. Considering that H-levels are valuable to search engine crawlers, developers should carefully consider what they put inside the H1 tag on each webpage of a website (Weideman, 2009). The presence of a unique <H1> tag is important for SEO performance (Drivas et al., 2021; Roumeliotis et al., 2022; Sharma et al., 2022). We hypothesize the following:

H5. The number of <H1> tags on an additional website positively impacts success of a crowdfunding campaign.

To determine popularity of a website and improve its ranking, search engines like Google count the number of inbound links, also referred to as backlinks. The more links a website acquires from other websites, the more it will improve its ranking (Evans, 2007; Zhang & Cabage, 2017). Beier and Wagner (2015) also found that providing a link to an additional website is positively related to the average amount of donations. Indeed, an additional website that reinforces the project's competence, trustworthiness, and shows work samples, testimonials, and references (Jarvenpaa et al., 2000) provides a wide range of online information and elicits a higher level of trust among consumers. Many SEO tools also use the number of links as quality indicators. As argued by Aswani et al. (2017), the page authority (PA) is a quality indicator that makes it possible to evaluate the popularity of a webpage according to the number and quality of backlinks. Thus, PA predicts how a given URL may be ranked on search engines. We can formulate the following hypothesis:

H6. Popularity of an additional website positively impacts success of a crowdfunding campaign.

It is also imperative that the website follows specific ergonomic recommendations. As demonstrated by Laperuta et al. (2017), in order to be attractive, a website should have a short loading time and offer a good user experience (i.e., integrate all functionalities that facilitate user navigation). If a webpage takes a long time to load, users may quit it, or stop using a website altogether (Pourghassemi et al., 2019). According to Google, 53% of mobile site visitors leave a page that takes longer than three seconds to load,[4] thus, a short loading time has a considerable positive impact on the SEO (Lewandowski et al., 2021). For instance, AliExpress claimed that a reduction of load time for their pages by 36% in 2016 resulted in a 10.5% increase in orders.[5] Based on this evidence we can hypothesize the following:

H7. Loading time of an additional website has a negative impact on success of a crowdfunding campaign.

One more parameter that can impact the SEO performance that is important for user satisfaction is compatibility with mobile devices (Chantzaras et al., 2017; Schubert, 2016). The Google PageSpeed Insights tool[6] enables the evaluation of performance and compatibility on a mobile device by attributing a "mobile score." A score of 90 or above is considered as "good;" one ranging from 50 to 90 means "needs improvement;" a score below 50 is considered to be "poor."[7] Our final hypothesis is:

H8. The mobile score of an additional website positively impacts success of a crowdfunding campaign.

RESEARCH METHODOLOGY

Sample and Data

We gathered crowdfunding data from KissKissBankBank, one of the French leaders among rewards-based crowdfunding platforms that was launched in 2009 and accumulated over €152 million to fund over 27,544 creative projects.[8] Using the method proposed by Wessel et al. (2016), available data on every crowdfunding campaign was collected automatically using a custom web crawler developed in Python with Selenium library.[9] Off-page communication factors also required the use of CAWIS (Computer Aided Web Information Sharing), a research prototype tool developed in Java that makes it possible to examine web visibility in real time and evaluate the SEO performance of a website (Sagot et al., 2018, 2021). Our sample contained a total of 1,791 projects (a total of 21,492 observations). For each campaign project, 14 variables were collected.

Measures

Dependent Variable

Dependent variables were represented by the crowdfunding campaign success. As discussed previously, a campaign is considered to be successful when it manages to raise funds. Following Lukkarinen et al.'s (2016) argument "the most successful crowdfunding campaigns can be seen to be those that attract both a sufficient amount of funds and a large number of individual investors," (p. 7) we decided to measure the exogenous variable by the number of backers (Nb_backers) and the amount raised (A_raised). The number of backers was computed by the number of individual backers that transferred funds to the target project campaign. The amount raised was the amount given by the backers to support the project. We chose continuous explained variables, rather than discrete ones, for the following two main reasons: (1) discrete variables restrict the amount of data availability and (2) we assumed that the project stakeholders were interested in the ways to strengthen the parameters that contribute to financing success (Clauss et al., 2020).

Independent Variables

Independent variables were related to social media and the presence of additional websites. The variables related to external social media included Facebook, LinkedIn, and Twitter page, the number of reactions on Facebook (React_FB), and the number of posts on Facebook (Posts_FB). Based on descriptive statistics, almost 93% of the analyzed project campaigns had a Facebook account, as compared to 12% that had LinkedIn and 67% that had Twitter accounts. We decided to measure the number of reactions and posts based on Facebook accounts. Explanatory variables according to the additional website included the mobile page score (Mob_Score), popularity (Popularity), page load time (Load_Time), number of <H1> tags (Nb_H1), and number of words (Nb_Words). These variables are summarized in Table 1.

Control Variable

The first control variable of our model was the percentage completed (P_GFunding) measured by the percentage of the funding goal for each project campaign given the requested amount (Mollick, 2014). Here, 100% was assumed to indicate that the target sum was reached, <100% to suggest that the target sum was not yet reached, while >100% was assumed to suggest that target sum was exceeded. We also controlled for possible effects resulting from the number of Facebook shares (Allison et al., 2017; Courtney et al., 2017; Xu, 2018). Considering that social media facilitate information sharing, it is important to share the project on a platform such as Facebook. This makes it possible to reach more people through relationships and facilitated information sharing (Xiaoyu et al., 2017). Accordingly, the size of the campaign project community on social media can predict whether the campaign will be successful. Said differently: the larger community a project has, the more likely

Table 1. Descriptions of variables

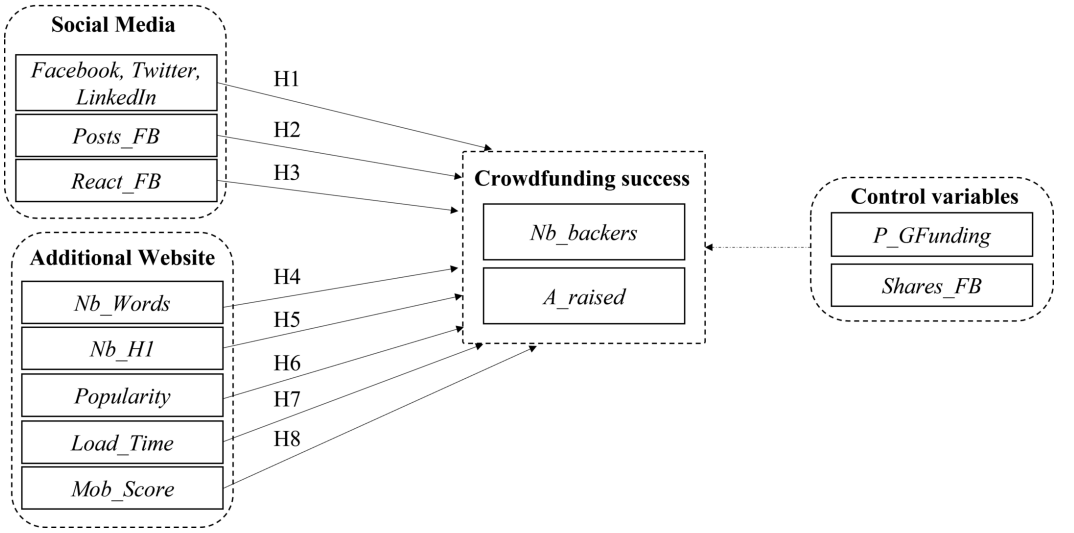
Category	Variable	Description
Crowdfunding Success	Nb_backers	Number of individual backers that transferred funds to the target project campaign
	A_raised	Amount given by the backers to support the project
Social Media	Facebook	Dummy variable equal to 1 if there is an external Facebook page related to the project, and 0 otherwise.
	Twitter	Dummy variable equal to 1 if there is an external Twitter page related to the project, and 0 otherwise
	LinkedIn	Dummy variable equal to 1 if there is an external LinkedIn page related to the project, and 0 otherwise
	React_FB	Number of reactions on Facebook (e.g., Like, Love, Wow, Haha, Sad, Angry)
	Posts_FB	Number of posts on Facebook
Additional Website	Mob_Score	The score summarizing the homepage performance on a mobile device (a score of ≥90 is considered to be fast, 50-90 is considered average, <50 is considered to be slow)
	Popularity	Additional website popularity is computed by the Page Authority (PA), a score from 1 to 100 (higher - better) which is provided by Moz. It predicts how a homepage URL will be ranked on search engines according to the number and the quality of backlinks.
	Load_Time	Time (in milliseconds) taken to receive the first byte from the website server
	Nb_H1	Number of <h1> tags on the homepage
	Nb_Words	Number of words in the <body> section of the homepage
Control	P_GFunding	Percentage completed of the funding goal for each project campaign
	Shares_FB	Number of shares on Facebook

the crowdfunding campaign will be successful (Lu et al., 2014; Lukkarinen et al., 2016). In order to avoid the regression model neglecting the effects, we include the number of Facebook shares. The research model including hypotheses is shown in Figure 1.

Model

In order to examine the relationship between off-page communication factors and the crowdfunding campaign success, as measured by the number of contributors and the amount raised, we conducted a cross-sectional regression analysis using STATA. The most interesting appeal of this method is that it provides several convenient ways to evaluate the off-page communication factors. Unlike longitudinal studies that focus on observations over an extended period of time, a cross-sectional study was used to examine what was happening at a single point in time across the sample (crowdfunding announcement). In other words: the present cross-sectional study was performed to simultaneously measure the campaign outcome and the exposures of the sample. This approach helped us to evaluate how off-page communication factors influenced the crowdfunding campaign success. To this end, we used the ordinary least squares (OLS) regression, which is one of the most popular statistical tools (Begum & Ahmed, 2015) to predict the association and its strength between continuous dependent variables and explanatory ones. The regression model that was used is shown in Equation (1) below.

Figure 1. Research model including hypotheses



$$\begin{pmatrix} Nb\_backers_i \\ A\_raised_i \end{pmatrix} = \sum_{j=1}^{K} \begin{bmatrix} \beta_1^i \\ \beta_2^i \\ \vdots \\ \beta_K^N \end{bmatrix} \begin{pmatrix} P\_GFunding_i \\ Facebook_i \\ \vdots \\ Mob\_Score_i \end{pmatrix} + \begin{pmatrix} \xi_1 \\ \xi_2 \\ \vdots \\ \xi_N \end{pmatrix} \quad (1)$$

Dependent variables $Nb\_backers_i$ and A_raised_i were considered as a function of a set of variables (independent and control variables) mentioned above. The list of all explanatory variables is presented in Table 1, and control variables are described in Control Variable section of this paper.

RESULTS

Descriptive Statistics

Table 2 presents a descriptive analysis of the set of variables used in this study. As can be seen in Panel A, the average number of backers was around 159. Furthermore, campaigns had an average funding amount of €9,154, with an average achievement percentage of 151%. In terms of social media, campaigns had an average number 312 posts on additional Facebook pages, while the average numbers of reactions and shares were 213 and 692, respectively. With regard to the additional website, the page authority score was on average 18, meaning that the additional website for each project had a low popularity and a corresponding low ranking on search engines. The average page load time of an additional project website was 1,192 milliseconds. The number of <H1> tags on the additional website and the number of words in the <body> section of homepages were on average 1.409 and 520 words, which means that additional websites were structured following SEO requirements (Drivas et al., 2021; Portier et al., 2020). Finally, as suggested by the average mobile score <50, the analyzed additional website performance on mobile devices was generally poor. Panel B of Table 2 summarizes descriptive statistics for our dummy variables. As can be seen in the results, 93.91% of the analyzed project campaigns had Facebook pages, 32.61% of the analyzed project campaigns

Table 2. Descriptive statistics

Panel A. Descriptive Statistics for Continuous Variables				
Variable	**Min**	**Max**	**Mean**	**Std. Dev**
Nb_backers	1	5959	158.855	310.252
A_Raised	2	420000	9153.509	16782.81
P_GFunding	0	27.38	1.512	1.598
Posts_FB	0	10018	312.065	557.223
React_FB	0	28871	213.345	1141.841
Shares_FB	0	40816	692.281	1684.723
Popularity	1	59	18.175	12.364
Nb_H1	0	62	1.409	3.253
Nb_Words	0	43669	519.675	1333.424
Load_Time	48	30011	1192.198	1835.81
Mob_Score	0	100	10.5	21.9
Panel B. Descriptive Statistics for Dummy Variables				
Facebook	Percent	Cumul		
0	6.09	6.09		
1	93.91	100		
Twitter				
0	67.39	67.39		
1	32.61	100		
LinkedIn				
0	87.33	87.33		
1	12.67	100		

had Twitter pages, and 12.67% had LinkedIn pages. These results speak in favor of our decision to consider only Facebook-related variables to measure success of the analyzed project campaigns.

The data collected for the number of backers and the amount raised variables (Nb_backers and A_raised) were directly scraped on each KissKissBankBank project campaign webpages, this information is publicly available on the platform. The funding goal was also scraped on the platform allowing to automatically calculate the percentage completed (P_GFunding). Off-page communication factors such as the number of posts on Facebook (Posts_FB) or the additional website popularity (Popularity) were collected by using social media and additional website URL links available on the KissKissBankBank project campaign webpages. Then, as presented in the Sample Data section of this paper, CAWIS scraping tool was used to collect data on the additional website and social media by using a HTML parser and several APIs (e.g., Moz, SemRush, Facebook, Ahrefs, PageSpeed Insights, etc.).

Correlation Matrix

Table 3 presents the matrix of correlations among our variables. As can be seen, two variables (Nb_Words and Shares_FB) were highly correlated, with the correlation coefficient above 0,8 (Gujarati, 2009; Kennedy, 2008).

Table 3. Correlation matrix

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
(1) Nb_backers	1.000													
(2) A_Raised	0.230	1.000												
(3) P_GFunding	0.491	0.088	1.000											
(4) Facebook	0.054	0.113	0.057	1.000										
(5) Twitter	0.193	0.062	0.149	0.097	1.000									
(6) LinkedIn	-0.014	0.012	0.056	-0.006	0.100	1.000								
(7) Posts_FB	0.145	0.073	0.084	0.034	0.142	-0.072	1.000							
(8) Popularity	0.258	0.129	0.119	0.091	0.383	-0.044	0.378	1.000						
(9) Load_Time	-0.106	-0.016	-0.038	-0.018	-0.054	0.048	-0.075	-0.212	1.000					
(10) Nb_H1	-0.010	0.029	-0.028	-0.047	0.003	0.047	0.004	-0.048	0.058	1.000				
(11) Nb_Words	0.102	0.082	0.042	0.067	0.095	0.176	0.065	0.091	0.053	0.158	1.000			
(12) ReactFB	0.222	0.140	0.141	0.130	0.216	0.013	0.266	0.360	-0.035	-0.073	0.125	1.000		
(13) SharesFB	0.091	0.077	0.046	0.072	0.087	0.191	0.069	0.074	0.041	0.138	0.964	0.113	1.000	
(14) Mob_Score	0.045	0.028	0.018	0.041	-0.009	0.037	-0.014	-0.023	0.016	-0.021	0.019	-0.017	0.011	1.000

Following Ben Arfa et al. (2017), in order to avoid correlation that could bias our results, we included/excluded these variables in the estimated separate models. This resulted in two models for each dependent variable (see Tables 4 and 5). The R-squared for each model have been specified.

Results

The results in Tables 4 and 5 revealed that the percentage of the funding goal was marginally important and significant (β=0.197 and 0.192, $p<0.01$) to attract more backers. Interestingly, it was less marginally significant (β =0.048, $p<0.1$) to raise more funding.

The results suggest that the more the amount of the funding goal is important, the more the number of backers is raising funds. Based on these findings, it can be concluded that a higher likelihood of reaching or exceeding the funding goal increased more the number of backers than the amount raised. Moreover, the number of Facebook shares has a positive and strong significant effect on the number of backers. Specifically, the results show that the number of Facebook shares is only marginally important and significant (β=0.034, $p<0.05$) to attract more backers, and not significant to increase funding.

Social Media Results

- Social Media

Based on the results reported in Tables 4 and 5, it can be concluded that social media have an important impact on success of crowdfunding campaigns. Specifically, Facebook was found to have a positive and significant effect on the number of backers and the amount raised. Interestingly, Facebook, as compared to other social media, was marginally important to gain more backers (β=0.303 and β=0.306, $p<0.05$) and to increase funding (β=0.557 and β=0.613, $p<0.05$). The relationship between Twitter and LinkedIn was not significant regarding crowdfunding success. Overall, these results support our Hypothesis 1.

- Post_FB

Table 4. Linear regression (number of backers)

	Model 1			Model 2		
Nb_backers	β	p-value	Sig	β	p-value	Sig
P_GFunding	0.197	0.000	***	0.192	0.000	***
Facebook	0.303	0.023	**	0.306	0.035	**
Twitter	0.054	0.335		0.058	0.331	
LinkedIn	-0.044	0.528		-0.057	0.423	
Posts_FB	0.062	0.002	***	0.064	0.003	***
ReactFB	0.060	0.000	***	0.055	0.000	***
SharesFB	-	-	-	0.034	0.014	**
Popularity	0.019	0.000	***	0.019	0.000	***
Nb_H1	0.002	0.813		0.002	0.870	
Nb_Words	0.028	0.142		-	-	-
Load_Time	-0.039	0.071	*	-0.028	0.223	
Mob_Score	0.283	0.010	**	0.297	0.009	***
Constant	3.138	0.000	***	3.053	0.000	***

R-squared 0.721 R-Squared. 0.710
Note. n = 1791, Significance: * p < 0.10, ** p < 0.05, *** p < 0.01

Table 5. Linear regression (amount raised)

	Model 1			Model 2		
A_Raised	β	p-value	Sig	β	p-value	Sig
P_GFunding	0.023	0.306		0.048	0.053	*
Facebook	0.557	0.021	**	0.613	0.019	**
Twitter	-0.027	0.774		-0.033	0.737	
LinkedIn	0.020	0.867		0.005	0.969	
Posts_FB	0.009	0.783		0.010	0.784	
ReactFB	0.070	0.005	***	0.069	0.008	***
SharesFB	-	-	-	0.034	0.167	
Popularity	0.010	0.036	**	0.010	0.036	**
Nb_H1	0.016	0.045	**	0.016	0.051	*
Nb_Words	0.014	0.649		-	-	-
Load_Time	-0.025	0.528		0.005	0.901	
Mob_Score	0.215	0.225		0.172	0.360	
Constant	7.475	0.000	***	7.072	0.000	***

R-squared. 0.736. R-squared 0.744
Note. n = 1791, Significance: * p < 0.10, ** p < 0.05, *** p < 0.01

Furthermore, the results in Tables 4 and 5 indicate that the number of posts on Facebook has a positive and strong significant effect on the number of backers. Specifically, the results suggest

that the number of posts on Facebook is marginally important and significant (β=0.062 and 0.064, p<0.01) to attract more backers. However, the impact is not significant on the amount raised, though it contributes to collect money at a percentage of 0.009 and 0.01. Accordingly, our results partially support Hypothesis 2.

- React_FB

Moreover, as can be seen in the results summarized in Tables 4 and 5, the number of reactions on Facebook also shows a positive and strong significant effect on the number of backers and the amount raised. Specifically, the number of reactions on Facebook is marginally important and significant (β=0.060 and 0.055, p<0.01) to attract more backers and also significant to increase funding (β=0.070 and 0.069, p<0.01). Taken together, the results of our data analysis support Hypothesis 3.

Additional Website Results

- Nb_Words

While most of our hypotheses discussed above were confirmed by the results, contrary to our expectations, we did not get significant results for Hypothesis 4 (NB_Words).

- Nb_H1

Our results show that the presence of <H1> tags on the additional website (homepage) has a positive and significant effect on the amount of raised funding. More specifically, our results suggest that the number of <H1> tags is only marginally important to increase funding (β=0.016, p<0.05 and β=0.016, p<0.1) and not significant to attract more backers. Based on these results, we can conclude that our Hypothesis 5 was partially confirmed by our data analysis.

- Popularity

We found that popularity of the additional website has a positive and significant effect on the number of backers and the amount raised. Specifically, the results revealed that the popularity is marginally important and significant (β=0.019 and 0.019, p<0.01) to both attract more backers and to increase funding (β=0.010 and 0.010, p<0.05). In summary, Hypothesis 6 was supported by our results.

- Load_Time

We found that the loading time of an additional website has a positive and significant impact on the number of backers. Specifically, we found that the loading time is only marginally important to attract more backers (β=-0.039, p<0.1) and not significant to increase funding. Taken together, our results partially confirm Hypothesis 7.

- Mob_Score

We found that the mobile score of the additional website has a positive and significant impact on the number of backers. Specifically, the results revealed that the mobile score is marginally important to attract more backers (β=0.283, p<0.05 and β=0.297, p<0.01), however, the effect was not observed

for funding. Therefore, our Hypothesis 8 was partially confirmed by our results, as the mobile score of the additional website was found to influence the number of backers, but not the amount raised.

DISCUSSION

In the previous section we found that the more the amount of the funding goal is important, the more the number of backers is raising funds. Based on these findings, it can be concluded that a higher likelihood of reaching or exceeding the funding goal increased more the number of backers than the amount raised. Accordingly, it could be considered as an indicator of the quality of the project and serve as driver for the "wisdom of the crowd" approval. The lower marginal effect to raise funding was previously reported to be due to the fact that the tendency to invest money into a project increases when the project has already reached a high percentage of the funding goal (Angerer et al., 2017; Herzenstein et al., 2011; J. Zhang & Liu, 2012). In this study, we focused on a specific period of time (crowdfunding campaign), which explains the lesser marginal effect.

Facebook was found to have a positive and significant effect on the number of backers and the amount raised. In line with this finding, Clauss et al. (2020) argued that "Facebook enables the sharing of information about a crowdfunding project with private contacts," LinkedIn "is more dedicated to networking in a business-related context," and Twitter "might be useful for updates within a crowdfunding platform." Similarly, Hughes et al. (2012) argued that Twitter is used more for sharing opinions and information rather than for online socializing, while Facebook is more popular for social interaction. Therefore, taking into account the nature of social networks, solicitations are more effective on Facebook and informative messages more effective on Twitter (Borst et al., 2018). Therefore, social contacts of project initiators on Facebook act more as signals of their capabilities and reliability towards uniformed parties. Startups that own social media webpages have a better chance to fund their projects through crowdfunding platforms. The present results are in line with Mollick (2014) and Angerer et al. (2017) who stated that social media webpages help to attract additional potential investors. Our findings are also consistent with previous results showing that social media are a strong predictor of success, both in terms of the number of investors and the amount raised. This is so because posting a campaign on social media may have a direct effect on investments because fans may follow the link and proceed to invest (Lukkarinen et al., 2016).

The number of posts on Facebook has a positive and strong significant effect on the number of backers. A reason behind this funding can be the "all-or-nothing" model, as, in order to keep all the money raised, the project should be approved by the wisdom of the crowd. The amount raised on rewards-based crowdfunding platforms frequently includes small financial contributions, as such platforms are associated with a low amount of risk (Gobble, 2012). For the significant effect, our results are consistent with Zhang et al. (2017) who identified that number of Facebook posts is a good predictor of success of crowdfunding campaigns. Similarly, Nevin et al. (2017) also highlighted that the more a company posts to social media, such as Facebook, the greater is their proportion of funding for a crowdfunding campaign. Project initiators who routinely communicate and interact with external parties via social media provide an opportunity for the crowd to learn more about the project at stake. However, in order to engage and respond, project initiators should ensure that each post communicates the campaign project identity to the crowd. And as reported by Cai et al. (2021), while the content about campaign developments, business developments, new funding, and collaboration projects have a positive impact on daily performance, the posts about the start-up team, business model, product developments, and campaign promotions have relatively lower impact.

The number of shares on Facebook has a positive and strong significant effect on the number of backers. Consistently with this finding, Kromidha et al. (2016) reported that the number of visitors who shared the project using their own Facebook page was positively statistically related to the amount pledged per backer. Therefore, more shares mean more word-of-mouth online promotion for the project beyond the direct network circle of the fundraiser. In this context, the more backers and supporters

identify themselves with the project in their social networks, the higher the number is of potential new backers who could support the project, which could also increase the pledge ratio. However, Kaminski et al. (2018) also argued that Facebook shares are only used as a signal for low levels of trend leadership, solution novelty, and campaign appearance tertiles, and that the signaling effect of social media support fades with an increase of perceived campaign quality. Thus, there is insufficient evidence to conclude that the number of Facebook shares is related to the amount pledged to the campaign. Kaminski et al. (2018) also found no convincing evidence that the number of Facebook shares is a similarly relevant signal for potential backers to reduce information asymmetry. Rather, the authors observed that the causal arrow between social media signals and pledged amounts runs in the opposite direction, with more innovative and successful projects attracting more social media attention. Social media activity follows a successful campaign but has no effect on the probability of a campaign's success. Based on these diverging results, we can conclude that the impact of Facebook shares on crowdfunding campaigns is not fully understood yet.

The number of reactions on Facebook also shows a positive and strong significant effect on the number of backers and the amount raised. These results are consistent with several previous studies that found that the number of "likes" can have a significant impact on the campaign success, which can incentivize project creators to drive users to "like" their projects (Jin et al., 2020; Nevin et al., 2017). Indeed, there is evidence suggesting that higher Facebook "like" counts can also send a good word-of-mouth signal to backers (Bi et al., 2017).

As concerns our results on social media, the social capital makes it easier for crowd members to share information (Clauss et al., 2020). Large social capital can inform other crowd members about reliability of a project and provide further opportunities for endorsement (Courtney et al., 2017; Roma et al., 2017). Through social networks, team members associated to a project may exhibit consistent behavior and a proclivity to align their investment decisions, as contributing to a project demonstrates interest in an idea or venture concept and can thus foster a sense of social identity with others who share similar preferences and values. In summary, our results confirm that in order to attract potential backers, social capital, as the first mechanism of crowdfunding, requires the use of existing social media and the creation of new project-specific networks (Clauss et al., 2020).

Contrary to our expectations, we did not get significant results for Hypothesis 5. According to Portier et al. (2020), a webpage with a high volume of content has higher chances to appear in the top 10 search engines results pages. Similarly, Zhou et al. (2018) also stated that funding success increases with every 1% increase in the length of the project, while Xiao et al. (2018) confirmed that the length of the project description has a favorable and significant impact on the reward tier selection of backers. Taken together, the results of these studies suggest that project description must be dense, and that project initiators have to work on this point, whether on the additional website or on the crowdfunding platform webpage. However, according to Moy et al. (2018), once the text becomes too long, the effect can diminish or even turn negative. Indeed, too much information can increase the burden of understanding, which would further complicate project evaluation (Liang et al., 2020). Following this logic, a lengthy text on an additional website can disturb backers; therefore, project initiators should consider this point and balance description length accordingly.

Moreover, some researchers indicated that another central factor that can influence campaign success is the quality of description writing (Zhou et al., 2018) including the style (Kunz, 2016), language (Mitra & Gilbert, 2014), and detailed narrative (Zheng et al., 2014). This suggests that, when writing a project description on the crowdfunding platform and on an additional website, project initiators should perform a global reflection on all factors, both quantitative and qualitative.

Overall, the <H1> tag, which is required to structure the content of a webpage, was reported to play an important role in the SEO strategy (Drivas et al., 2021). In order to improve the ranking of a webpage on search engines, it is important to use one <H1> tag per page. In our results, the average number of <H1> tags was 1.409 (around 1, see Table 1); therefore, it can be concluded that most of the campaigns followed this SEO rule. Beyond the SEO consideration, the use of <H1> tag

indicates that project initiators follow a strategy of content structuration on an additional website by making a difference between the level of importance of the shared information (Drivas et al., 2021; Roumeliotis et al., 2022; Sharma et al., 2022; Weideman, 2009). This could facilitate content quality, navigation quality, and interactivity, which effectively or sufficiently satisfies user needs and therefore supports their intention to back projects.

The popularity of the additional website has a positive and significant effect on the number of backers and the amount raised. These results provide strong evidence that popularity of the additional website, as determined by the number of backlinks from different domains and the quality of those domains which link back (Aswani et al., 2017), has a strong impact on success of project campaigns. The popularity of the additional website, evaluated by the page authority (PA), also plays a major role on the website visibility on search engines (Evans, 2007; S. Zhang & Cabage, 2017). These results are consistent with Beier et al.'s (2015) argument that "e-commerce" strategy must be used in order to convince backers. Similarly, to traditional buyers, potential customers in the sphere of e-commerce must be linked to the project website in order to make purchases.

The loading time is only marginally important to attract more backers and not significant to increase funding. This suggests that an additional website must have a good user experience to improve SEO[10] (Lewandowski et al., 2021) and facilitate user navigation (Laperuta et al., 2017). According to Wang and Emurian (2005), people's cognitive and emotional responses are influenced by their website perceptions and experiences. And as argued by Stadnik et al. (2018), user satisfaction and acceptability of page load times affect e-commerce conversion rates. If a website does not satisfy users' desired performance requirements in terms of page load time, customers may abandon visiting such websites (Pourghassemi et al., 2019). Interestingly, while page load time of an additional website is an important factor that influences the number of backers, this parameter was not found to impact the amount raised. A possible interpretation of this finding is that the amount raised on rewards-based crowdfunding platforms, which are generally characterized by low risk, frequently consists of small financial contributions (Gobble, 2012).

The mobile score of the additional website was found to influence the number of backers but not the amount raised, as many websites have problems adjusting to mobile devices, which may generate annoyance among users. There is also a common understanding that users should not be exhausted by the design patterns, but rather be enthralled by them (Chantzaras et al., 2017), and this also influences the SEO (Schubert, 2016).

Overall, the results of the study are in line with the literature and allow for a better understanding of the off-page communication factors (Beier & Wagner, 2015). However, these off-page communication factors should be used in a complementary way with the on-page communication factors. Project initiators should not only limit the communication actions on the crowdfunding platform but also outside by using an additional website and external social media. The main difference between on- and off-page communication factors is that for the first, rules are imposed by the crowdfunding platform, for the second, rules are imposed by search engines and social media algorithms.

CONCLUSION

In this study, we investigated how off-page communication factors influence success of crowdfunding campaigns. Upon identification of relevant drivers of campaign success, we evaluated the influence of these variables using a dataset of 1,791 projects. Our results revealed that social contacts on external social media, as well as visibility and user experience of an additional website can help to reduce information asymmetry and promote trust among project parties. Several criteria related to search engine optimization (SEO) practices such as website popularity, structure, user experience, and content, or interaction on external social media, were found to influence the number of backers and the amount raised.

Taken together, our results underscore the importance for project initiators' communication efforts toward using external social media and an additional website. As demonstrated by our findings, these additional communication channels provide a wide range of online information to help stakeholders in their decision-making. Our results on the additional website, including the number of <H1> tags, popularity, loading time, and mobile score, provide convincing evidence about the importance of the implementation of search engine optimization (SEO) techniques to improve success of project campaigns. The projects' presence in social media, such as Facebook, LinkedIn, and Twitter, as well as the number of posts, shares, and reactions on Facebook, were found to play a major role in success of crowdfunding campaigns. Although we did not gather data on specific traffic sources, we can reasonably expect that off-page communication factors can drive qualified visitors to project pages on crowdfunding platforms, as well as help to generate trust in the competence and benevolence of project initiators. Our major conclusion is that the quality of off-page communication does influence backers' purchase intention and has a significant effect on the success of crowdfunding campaigns.

Implications

This study adds to the existing literature in three important ways. First, our results add to the growing body of evidence on the importance of factors in the success of crowdfunding campaigns. Second, this research bridges the gap between off-page communication factors and the success of rewards-based crowdfunding campaigns. Third, the findings provide significant insights into the relationship between SEO performance and the success of crowdfunding campaigns.

Furthermore, the results offer important practical implications for projects initiators, platform owners, and backers. First, our findings help project initiators to better determine which off-page communication method can lead to the successful raising of funds and how to implement relevant changes before launching their campaigns. More specifically, the project initiators should, after creating an additional website, focus on impactful SEO factors such as <H1> tags, popularity, loading time, and mobile score while promoting the project on social media, especially on Facebook. Second, our findings offer advice and reminders to crowdfunding platform operators with regard to important off-page communication factors. Indeed, crowdfunding platforms such as Kickstarter and KissKissBankBank communicate on the importance of sharing the project campaign on social media. They should also integrate advice on the importance of SEO, not only on their internal search engine but also for the additional website visible on external search engines such as Google. Third, our findings are relevant to backers in their information seeking and decision making about crowdfunding projects. Backers could integrate social media and the additional website SEO performance evaluation in their funding decision process.

Limitations and Future Directions

The present study has several limitations. First, since we analyzed the data collected from only one platform, in order to verify the generalizability of our findings, it would be reasonable to analyze data collected from other platforms in the future. Second, the data analysis performed in the present study was largely quantitative, which suggests that there is a need to analyze the data using a combination of quantitative and qualitative approaches, such as interviews with project initiators and backers. Third, it would also be interesting to explore the thresholds at which the variables explored in become more effective in terms of driving success of crowdfunding campaigns. Additionally, it would be valuable to investigate questions regarding moderating factors to examine under what conditions the hypothesized main effects are stronger or weaker. Through an analysis of off-page communication factors and mechanisms permitting the identification of successful crowdfunding campaigns, further research can also explore the development of a decision support system that would support stakeholders' fundraising strategy.

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ENDNOTES

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