

"The Impact of Platform - Related Communication Factors on Crowdfunding Success"

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ABSTRACT

Crowdfunding platforms allow entrepreneurs to raise funds from a large number of people. On these platforms, communication plays a crucial role in attracting and maintaining investors, reducing information asymmetry issues, and signaling quality. Drawing on a dataset of 1,913 technology projects from Kickstarter, this paper examines specific communication strategies (updates, comments, FAQs, description length, videos, and images) and their impact on crowdfunding success. This research contributes to the crowdfunding and communication literature, provides insights into the current trends and practices, and provides actionable strategies for entrepreneurs, investors, and crowdfunding platforms.

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Keywords

Crowdfunding, Communication, Information Asymmetry, Kickstarter, Entrepreneurship, Crowdfunding Platforms

1. INTRODUCTION

1.1 Topic Introduction

To succeed in the long term, entrepreneurs need to secure sufficient resources, especially financial ones, to maintain the business and its daily activities and to invest in R&D activities to gain a competitive advantage (Brush et al., 2001). One of the challenges faced by many entrepreneurs is the limited access to traditional forms of capital, such as bank loans, due to reasons like information asymmetry, where the entrepreneur has more information about the potential of their projects than investors (Crosetto & Regner, 2014). Moreover, the problem of information asymmetry combined with the problem of limited available cash leads to entrepreneurs struggling to complete their projects (Crosetto & Regner, 2014). Additional difficulties in securing traditional financing include unrealistic requirements set out by external fund providers, geographical location, or the problem of finding the right investor (Saleem & Atiq, 2023). Traditional lenders usually have high eligibility standards for offering loans, such as minimum credit score, business history, and collateral, which can be difficult for smaller businesses to fulfill (Lung, 2024). The application process can be time-consuming and require extensive financial documentation (Lung, 2024).

Due to the perceived high risk of investing in a smaller business, traditional lenders tend to prefer larger and more established businesses, limiting the available financing for entrepreneurs in smaller companies. Obiora and Csordás (2017) note that several alternative financing methods, such as peer-to-peer (P2P) lending and venture capital, emerged as substitutes for traditional bank loans. Crowdfunding is defined by Schwienbacher and Larralde (2010) as "an open call, essentially through the Internet, for the provision of financial resources either in the form of donation or in exchange for some form of reward and/or voting rights to support initiatives for specific purposes", represents a feasible alternative to the traditional financing.

Despite the active use of crowdfunding as a financing option, entrepreneurs can use it for multiple reasons. Crowdfunding may help to test, promote, and market products, while providing a better understanding of customer preferences and supporting user-based innovation (Belleflamme et al., 2010). It can help demonstrate the demand for a specific product, attract more traditional funding (Mollick, 2014), and help entrepreneurs form new connections and gain approval, both for themselves and their work (Gerber & Hui, 2013). However, crowdfunding also presents several challenges. Throughout the process, multiple decisions should be made, such as choosing the right platform and setting the right goal, which impacts the outcome. The process can be time-consuming, and resource-intensive (Gerber & Hui, 2013), presenting a challenge for single entrepreneurs, and smaller businesses with limited human resources. There is also the risk of ideas being copied, as well as public failure and embarrassment, which can have an impact on future investments (Gerber & Hui, 2013). Finally, there is no certainty that the project will be able to meet its financial goal due to a lack of backers (Gerber & Hui, 2013).

According to the crowdfunding literature, one of the elements influencing the campaign outcome is the use of communication strategies. Lapira (2018) defines communication strategies as methods used by entrepreneurs to share information about projects to promote those and to interact with investors on platforms. Moritz et al. (2015) studied how investor communication reduces information asymmetry in equity crowdfunding. Grebelsky-Lichtman and Avnimelech (2018) focused on how verbal and non-verbal communication predicts success in rewards-based crowdfunding. Crescenzo et al. (2021)

researched the role of content communication and third-party endorsements in campaigns. The active study of communication and its impact showcase the role of effective communication strategies in crowdfunding, especially due to communication taking place mostly in an online environment. The Internet offers benefits such as reduced costs and time for raising funds compared to more traditional methods. However, replacing face-to-face interactions with pseudo-personal communication over the Internet can create impediments by increasing the difficulty of convincing investors and by increasing information asymmetry (Moritz et al., 2015).

Effective communication strategies can help entrepreneurs deal with information asymmetry, maintain investors' interest, and build trust, ensuring investors don't withdraw their investments before the campaign ends. Crowdfunding platforms are the primary source of information for investors and electing the right methods of communication represents an additional difficulty for entrepreneurs.

Despite the growing literature on crowdfunding, there has been limited research into how communication within crowdfunding platforms can influence the campaign's outcome. The gap in literature can be explained by several aspects. First, crowdfunding platforms have a variety of communication tools (comments, updates, direct messages) used in different ways by different people. This variety makes it hard to conduct an in-depth analysis of all the tools. Second, the platforms are always improving their features or are adding new ones, changing also how people communicate. Lastly, researchers have access to limited data and there are different metrics used. One study can research the impact of comments by counting their number while another can use a sentiment analysis to gain insights. As crowdfunding is an evolving concept (Fleming & Sorenson, 2016) there is a need for continuous research on the topic of platform-related communication strategies.

1.2 Research Question

The purpose of this study is to answer the research question "What specific communication strategies on crowdfunding platforms influence the success chance of crowdfunding projects the most?". To find an answer to the central question, five sub-questions were identified:

1. How does the frequency of updates affect the success of crowdfunding projects?
2. How does the amount of comments affect the success of crowdfunding projects?
3. How does the amount of frequently asked questions (FAQ) affect the success of crowdfunding projects?
4. How does the amount of images and videos in the description affect the success of crowdfunding projects?
5. How does the length of the description affect the success of the crowdfunding projects?

1.3 Contributions

Despite the increasing body of literature on success factors in crowdfunding, existing studies often tend to have a more general focus. While communication was recognized as a crucial success factor by researchers like Mollick (2014), Lai et al. (2017), and Zhou et al. (2016), it is frequently studied within a larger context of platform-related factors, including also overall metrics like funding goal or accounting for external communication elements such as social media. For example, Kaartemo et al. (2017) focused on analyzing factors from four different categories: campaign-related, crowdfunding-related, platform-related, and fund-seeker-related factors. Such an approach often overlooks the isolated effects of platform communication strategies. This study addresses this issue by

focusing on particular communication methods. Moreover, most of the past research, primarily focused on projects before 2020, making the results outdated and less relevant to the current crowdfunding situation, due to technological advancements and innovative tools and AIs. These innovations have likely influenced project success differently than they did five or ten years ago. Moreover, as crowdfunding grows in popularity, competition increases, and investor behavior changes, due to investors having more alternatives, making them more careful about where they invest their money. As a result, there is a gap in the literature on how the chosen communication strategies affect the outcome of a project. This research aims to fill this gap by providing empirical evidence for this.

The findings of this research are practically relevant and guide entrepreneurs who intend to start using crowdfunding platforms to finance their projects. The paper provides entrepreneurs with an overview of what platform communication-related factors influence the success chance the most. Project creators will be able to make better decisions, understand the aspects they must prioritize during their campaigns, and efficiently allocate the often limited resources. At the same time, entrepreneurs can extract insights on improving communication to reduce the information asymmetry with their investors. By investigating these communication factors, this research can help entrepreneurs assess the necessity of good communication strategies and increase the overall funding rate. Moreover, the results of the study can be used by investors to make more informed decisions when looking to fund a project. Investors can use specific communication factors to find signals of the quality of the project and assess whether a project has the potential for success. Investors will be able to reduce the risk of investing in projects that might fail or result in the delivery of a poor-quality product. This will allow investors to better allocate their resources. Lastly, the insights from the study can be used by crowdfunding platforms for further improvements. By knowing which communication aspects are the most important, platforms can be upgraded in a way that will support both the entrepreneurs and the investors. In exchange, platforms will gain their benefits. More interactive platforms will attract more backers and creators to use its services. As more projects are funded, the platforms will manage to increase their profits.

This paper is structured as follows. Section 2 provides a literature review on the forms, models, and platforms of crowdfunding. Moreover, it discusses the main findings on communication strategies in the crowdfunding literature, develops a theoretical framework, and develops the hypotheses. Section 3 discusses the methodology and data for the research. Section 4 provides an overview of the descriptive statistics, correlation matrix, and regression analysis results. Section 5 discusses industry implications. Section 6 contains research limitations and future research recommendations. Section 7 provides a conclusion.

2. LITERATURE REVIEW

2.1 Forms of Crowdfunding

Four types of crowdfunding are described in the academic literature. Reward-based crowdfunding is the most common type, in which, investors receive a material or immaterial reward in exchange for their investment (Kraus et al., 2016) and are considered early customers of a product, offering them early access and better prices (Mollick, 2014). In equity-based crowdfunding, investors expect to gain a financial return in exchange for the investment (Hossain & Oparaocha, 2017). In debt-based crowdfunding, investors lend funds for a specific period, which have to be returned with a possible interest

(Hossain & Oparaocha, 2017). Lastly, in donation-based crowdfunding investors don't expect something in exchange for their funds (Mollick, 2014). Donation-based crowdfunding is often seen in fundraising (Hossain & Oparaocha, 2017).

2.2 Crowdfunding Platforms

In recent years, platforms like Kickstarter and Indiegogo have become popular among entrepreneurs. These platforms act as intermediaries between entrepreneurs looking for funds and investors willing to contribute small amounts towards a shared goal (Belleflamme et al., 2014). Platform operates on one of the two models: (1) all-or-nothing model, where the funds are returned to investors if the goal is not met, or (2) all-and-more model allowing to keep the funds even if the project does not meet the goal (Gerber & Hui, 2013). Using such platforms allows one to run campaigns, advertise projects, manage payments, and communicate with investors, in exchange for a fee, calculated as a percentage of the raised amount (Fleming & Sorenson, 2016). Most platforms tend to adopt one type of crowdfunding. Kickstarter, Indiegogo, GoFundMe, and Patreon are some examples of platforms that adopted the reward-based type. For entrepreneurs, it is important to carefully analyze the benefits and drawbacks of each platform to increase the chance of finding the right target audience.

2.3 Theoretical Framework

In the context of this research, two relevant theories are discussed: 1) Information Asymmetry and 2) Signaling Theory. Information asymmetry in crowdfunding assumes that investors have more incomplete and imperfect information about a project than entrepreneurs (Courtney et al., 2016), leading them to make decisions based on limited public data and lacking access to important private information (Connelly et al., 2010). This gap is amplified when more innovative, new-to-the-market ideas, with higher uncertainty are developed (Belleflamme et al., 2014). When the gap is not bridged, investors may fund projects that deliver poor products, known as "lemon" (Akerlof, 1970), or not deliver anything at all. Small investors often do not possess the skills and resources to assess the potential of an investment, and as such, entrepreneurs need to find a way to signal their value to increase their success chance (Ahlers et al., 2015). The signaling theory is proposed in the literature as a solution to information asymmetry, analyzing different types of signals and the situation in which they can be used (Kunz et al., 2016). Connelly et al. (2010) note that usually, the sender decides whether and how to transmit information through signals, while the receiver, must choose how to interpret these signals. The sender may find it difficult to provide information due to reasons such as the lack of skills required to effectively communicate, or due to intellectual property theft. For a signal to be effective, it needs to be credible, which often results from the signal being costly to imitate or the signal originating from a third party (Fischer & Reuber, 2007). In crowdfunding projects, entrepreneurs can signal quality in multiple ways, for example, by posting regular updates or a well-written project description.

2.4 Crowdfunding Communication in Literature and Research Hypotheses

In this section, we review the literature on communication in crowdfunding campaigns and formulate relevant hypotheses to address the research question. The key communication strategies discussed include updates, comments, Frequently Asked Questions (FAQ) entries, the length of the project description, and the presence of videos and images. A more comprehensive literature review can be found in Table A in the Appendix.

Updates facilitate communication with investors (Kunz et al., 2016), help to address the information asymmetry issue, act as a quality signal, and are generally associated with higher success chances in the crowdfunding literature. By posting regular updates, entrepreneurs can keep investors up to date about the project progress, such as milestones or hurdles (*What Are Project Updates?*, n.d.). Moreover, Kickstarter highlights that updates help reassure investors by preventing them to assume the worst and show appreciation for their support, provides important information to investors, and build a positive reputation for entrepreneurs for future campaigns by showcasing good work practices (*What Are Project Updates?*, n.d.). Xiao et al. (2014) found that each 1% increase in the number of updates, increases the funding by 0.80%. Mollick (2014) observed that the lack of an early update reduces the chance of success by over 13%. Xu et al. (2014) concluded that projects without updates have a 32.6% success rate, while with updates - 58.7%. Kim et al. (2017) discovered a strong positive correlation (0.364) between updates and success. Lagazio and Querci (2018) determined that updates increase success probability by 5%. Wachira and Wachira (2021) found a strong positive correlation (0.528) between updates and success, while Wang et al. (2018) observed a much weaker positive correlation (0.050).

H1: There is a positive relationship between the number of updates posted by entrepreneurs and the project's success.

By responding to comments, entrepreneurs can share more details about the project, respond to concerns, and reduce the information gap, maintaining a sense of trust and transparency. Moreover, according to Wang et al. (2018), entrepreneurs can answer questions, clarify project details, announce about changes, and show appreciation towards investors. Comments signal to potential investors that the project's community is actively interested and engaged, encouraging them to join. As such, the effect of comments was extensively studied. Xiao et al. (2014) found that for each 1% additional comments in a project, its funding increases by around 0.65%. Kim et al. (2017) discovered a positive correlation between the number of comments and success (0.226). Telve (2019) and Tafesse (2021) concluded that more comments tend to decrease the probability of success, with coefficients of -0.000019 and -0.001. Wachira and Wachira (2021) observed a moderate positive correlation between comments and successful projects (0.314) while Wang et al. (2018) found a weaker positive correlation (0.127).

H2: There is a positive relationship between the number of comments and the project's success.

FAQ sections are used to answer the most common investor questions about a project (Wachira and Wachira, 2021). A detailed FAQ section in campaigns mitigates the information asymmetry by allowing entrepreneurs to offer additional details and clarify investor doubts (Telve, 2019) while increasing transparency and reducing the number of repeating questions that may be asked in the comments section (Andsten, 2018). From the signaling theory perspective, a more detailed FAQ section signals the entrepreneur's commitment and effort (Kunz et al., 2016), making the project more attractive to investors. Kunz et al. (2016) found that more FAQ entries are associated with an increase in project success chance (0.072). Telve (2019) and Tafesse (2021) concluded that a larger FAQ section slightly decreases the likelihood of success, with coefficients of -0.004 and -0.020. Wachira and Wachira (2021) found a weak positive correlation between FAQs and successful projects (0.190)

H3: There is a positive relationship between the number of FAQ entries and the project's success.

A campaign's description is an essential primary source of information for investors and serves as a marketing tool for entrepreneurs, sharing similar content and the role of traditional business plans (Zhou et al., 2016). Kickstarter advises entrepreneurs to include in their descriptions what the entrepreneurs are trying to create, how they plan to make it happen, the progress made so far, the budget, a plan on how to use the funds, and the story behind the product (*What Information Should I Share on My Project Page?* n.d.). Kaminski and Hopp (2019) note that detailed descriptions help to form investor expectations and may induce the belief that the founder has the necessary abilities and knowledge to finish the project, leading to an increase in funding chances. Kim et al. (2017) found that description elaborateness positively correlates with success ratio (0.189). Lagazio and Querci (2018) concluded that descriptions over 500 words increase success probability by 13%. Xiao et al. (2014) observed that each 1% increase in project description details increases success between 0.32% and 0.35%. Telve (2019) found that more words in a project description negatively impact success, with a coefficient of 0.027.

H4: There is a positive relationship between the number of words in the project description and the project's success.

Including videos in a campaign enhances the campaign's credibility and connects emotionally with viewers more effectively than text descriptions (Clark and Stewart, 2007). Videos provide additional visual and auditory information about the project, reducing information asymmetry and signaling entrepreneurs' commitment and preparation (Mollick (2014). Videos can attract more attention and increase engagement. Kickstarter highlights the positive impact of videos on campaigns and provides a feature called "Project Video Analytics" that tracks metrics such as video play counts (*Creator Video Analytics*, 2012). Mollick (2014) found that not including a video in the description decreases success chances by 26%. Xiao et al. (2014) concluded that each additional video improves crowdfunding performance by around 109%. Lagazio and Querci (2018) observed that using a video to introduce projects reduces funding chances by 5%. Wang et al. (2018) found a positive correlation between the presence of a video and project success (0.046).

H5: There is a positive relationship between the inclusion of videos in the project description and project success.

In crowdfunding, images help to mitigate information asymmetry by communicating product characteristics and development stages, helping investors assess the product's market readiness (Courtney et al., 2016). Images tend to signal quality and founder credibility, by demonstrating preparedness (Courtney et al., 2016). Product images can increase the perceived quality, with or without descriptions (Peck and Childers, 2003), by allowing entrepreneurs to present their prototypes, giving investors an idea of how the final product should look and how it will function. Wang et al. (2018) found a negative correlation between the quantity of pictures and project success (-0.046). Tafesse (2021) concluded that the number of images is positively associated with success (0.014). Kunz et al. (2016) on the other side found that there is a slight decrease in the probability of project success as the number of images increases (-0.030).

H6: There is a positive relationship between the number of pictures in the project description and the project's success.

3. METHODOLOGY AND DATA

3.1 Research Design

Three types of research design are described by *Creswell (2009)*: qualitative, quantitative, and mixed. This study uses a quantitative approach to test theories by examining relationships between variables through hypothesis testing, data collection, and statistical methods to conclude the acceptance or rejection of hypotheses (*Creswell, 2009*). This approach is appropriate to this research for three reasons. First, reliance on numerical data and precise measurements allows for the reduction of bias and the influence of personal opinions (*Muijs, 2004*), increasing objectivity (*Creswell, 2009*). Second, numerical data provide exact insights into which factors influence a campaign's outcome the most (*Muijs, 2004*). Third, the results and findings of the research can be benchmarked against prior studies on communication in crowdfunding, allowing for results validation.

3.2 Sampling

For research studying the entire population is the best solution, but often impractical, due to the size and diversity of data requiring the study of a sample instead (*Acharya et al., 2013*). According to *Shepherd (2023)*, there were 6,455,080 crowdfunding projects as of 2022. Analyzing this entire population is impractical, necessitating the selection of a smaller sample to be studied. In the context of crowdfunding, a sample refers to a representative subset of all crowdfunding projects worldwide. *Acharya et al. (2013)* propose two sampling methods: 1) probability sample, where each unit in the population has an equal chance of being selected in the sample, and 2) not-probability sample, where the sample is selected using a non-random method. For the specific research, the non-probability sampling method is used. Therefore, the sample of this study contains 1,913 projects from the technology category from Kickstarter, launched between January 1 and December 31, 2023, including both successful and unsuccessful

campaigns. By focusing on data from 2023, the study will cover the most recent data and trends, particularly important for the technology category, a quickly evolving sector.

Kickstarter was selected for the research as it is one of the biggest crowdfunding platforms, with over 600,000 projects across 15 categories and more than \$8 billion pledged since its launch in 2009 (*Kickstarter Stats — Kickstarter, 2024*). Moreover, a large number of researches done on crowdfunding used Kickstarter data (*e.g., Mollick (2014); Xiao et al. (2014); Kunz et al., (2016)*), allowing to benchmark and validate the results and findings against prior studies, improving data reliability. Furthermore, analyzing technology projects can broaden the results' applicability for several reasons. Firstly, technology drives most innovations, with entrepreneurs developing and introducing new products that investors are often reluctant to invest in due to risk aversion (*Mohnen et al., 2008*). Secondly, technology is one of the most funded industries in crowdfunding, with over \$1.54 billion raised on Kickstarter alone (*Kickstarter Stats — Kickstarter, 2024*), indicating the importance of studying why this sector attracts more funding than others. Lastly, the technology sector represents one of the categories with the most prominent information asymmetry, present due to entrepreneurs failing to disclose information about the project to prevent idea theft, also called the "problem of appropriability" by *Mohnen et al. (2008)* and due to the specialized knowledge that is required to develop and understand technologies, which most investors lack, leading to decisions being made without full information. This increases the risk of fraud and unethical behavior by entrepreneurs (*Du et al., 2020*).

3.3 Variables

Table 1 presents the main variables used to conduct the analysis, as well as their type (dependent, independent, control), definition, measurement, and authors that used the same measurement.

Variable	Type	Definition	Measurement	Authors
"FundingSuccess"	Dependent	Project meets/exceeds its funding goal by the end date.	1 = Successful; 0 = Unsuccessful	Wang et al. (2018)
"FundsRaised"	Dependent	The total funds raised at the end of the project.	Monetary amount	Anglin et al. (2018)
"FundingRatio"	Dependent	The pledged amount as a percentage of the funding goal.	Percentage	Giudici et al. (2017)
"BackersNumber"	Dependent	Total number of investors.	Count of backers	Tafesse (2021)
"UpdatesNumber"	Independent	Updates from founders on project progress and milestones.	Count of updates	Xiao et al. (2014)
"CommentsNumber"	Independent	Questions, feedback, and discussions about the project.	Count of comments	Lai et al. (2017)
"FAQsNumber"	Independent	Common questions and answers about the project.	Count of FAQ entries	Kunz et al. (2016)
"WordsNumber"	Independent	The main description explaining the project and its goals.	Count of words in project description	Xiao et al. (2014)
"VideosNumber"	Independent	Videos uploaded or embedded on the project page.	Count of videos	Telve (2019)
"ImagesNumber"	Independent	Visual content in the project description.	Count of images	Wang et al. (2018)
"FundingGoal"	Control	The financial target set at the beginning of the campaign.	Monetary amount	Telve (2019)
"Duration"	Control	Length of the campaign from launch to deadline.	Number of days	Tafesse (2021)
"RewardTiers"	Control	Contribution levels offering different rewards.	Count of reward levels	Zhou et al. (2016)
"PreviouslyCreated"	Control	Creator's prior created projects on the platform.	Count of created projects	Tafesse (2021)
"PreviouslyBacked"	Control	Creator's experience in backing projects on the platform.	Count of backed projects	Tafesse (2021)
"Country"	Control	The country where the project is based.	Country Name	Liang et al. (2020)

3.4 Data Collection

The process of data collection presented significant challenges due to the limited number of databases on Kickstarter projects. WebRobots, a web scraping platform, mentions that their

datasets are incomplete, due to Kickstarter limiting the number of projects that can be viewed in a single category, restricting the scraping ability (*Kickstarter Datasets, n.d.*). This can introduce a sampling bias and affect the generalizability of the

results. Additionally, the extracted data in the WebRobots datasets is inconsistent and requires an extensive cleaning process, which can result in data loss and errors, compromising the accuracy of the findings and the conclusions drawn. Therefore, other scraped databases are also likely to lack a complete list of projects and may contain incorrect information. Due to the specific challenges, the chosen data collection approach was to manually search, extract, and record data for most variables. For three variables (WordsNumber, VideosNumber, ImagesNumber), a JavaScript code was manually inserted and executed within the Developer Tools of the web browser for each project. The resulting data was manually recorded into the dataset.

3.5 Data Preparation

To prepare the data for analysis, two tasks were performed: 1) an accuracy check and 2) a data-cleaning process. To conduct the accuracy check, the created dataset of 1,913 projects was imported into RStudio. From this dataset, a new sample was generated specifically for the accuracy check. Using Cochran's formula (Nanjundeswaraswamy & Divakar, 2021);

$$n = \frac{Z^2 * P * (1 - P)}{E^2}$$

where n is the sample size, P represents the population size, E is the margin of error and Z is the z-value extracted from a z-table, based on a 95% Confidence Interval, a sample size of 385 projects was calculated. RStudio then randomly selected and displayed these 385 projects from the original dataset, and the data for each project was manually re-checked and corrected for errors.

The data cleaning process in Rstudio included four main steps: removing projects with missing values (one project), deleting duplicated projects, standardizing variables for consistency, and identifying outliers. The outliers present due to extreme values were identified using the Inter Quartile Range (IRQ) method, which calculates outliers based on data points outside the lower (Q1-1.5*IQR) and upper (Q3+1.5*IQR) bounds (Vimutha et al., 2018). The impact of outliers on mean and variance are presented in Table B in the Appendix.

4. DATA ANALYSIS AND RESULTS

4.1 Descriptive Statistics

Table 2 presents the main descriptive statistics for the numerical dependent, independent, and control variables. FundingSuccess has a mean of 0.44, indicating that 44% of projects manage to reach their funding goal. In prior studies, different researchers found similar success rates. For instance, Chen (2022) found a success rate of 52%, Adamska-Mieruszewska et al. (2021) - 47%, Courtney et al. (2016) - 0.40%, and Giudici et al. (2017) - 44%. The FundingRatio has a mean of 862.35, skewed by outliers where some projects greatly exceed their funding goals, and a mode of 0 indicates that many projects get no funding at all. The BackersNumber variable has a mean of 266.41. A very different mean of 75.57 was found by Devaraj et al. (2016) and 88.57 by Moy et al. (2018). The difference may be due to several projects that have a very high number of backers. The mode shows that many projects have 0 backers.

The skewness analysis indicates that most variables are right-skewed, indicating an asymmetry where the tail on the right side of the distribution is longer or fatter than the left side (1.3.5.11. Measures of Skewness And Kurtosis, n.d.). However, the FundingSuccess (0.23) and Duration (0.61) variables have skewness closer to zero, indicating a more symmetrical distribution. Some variables display very high values for skewness, indicating extreme asymmetry, such as the FundingGoal variable with a value of 25.30. To reduce skewness, variables with higher skewness will undergo log transformations (Pither, 2023). A small positive constant will be added to the variables with zero values present, before applying the log transformation, such as the logarithm of zero is undefined (Pither, 2023). The constant in our research is 1 (Pither, 2023) and will be added to the variables: FundingRatio, BackersNumber, UpdatesNumber, CommentsNumber, FAQsNumber, VideosNumber, ImagesNumber, FundingGoal, PreviouslyCreated and PreviouslyBacked.

For the categorical variable Country, a separate descriptive table is presented, where the count and frequency of each country are calculated. The detailed data can be examined in Table C in the Appendix.

Table 2: Descriptive Statistics (n = 1912)

Variable	Mean	Median	Mode	Range		SD	IQR		Skewness
				MIN	MAX		Q1	Q3	
				"FundingSuccess"	0.44		0.00	0.00	
"FundsRaised"	243666.90	1820.50	1.00	0.00	33004220.00	1346187.00	101.00	43409.25	13.06
"FundingRatio"	862.35	26.81	0.00	0.00	107922,5	3664.80	0.54	474.56	16.39
"BackersNumber"	266.41	14.00	2.00	0.00	18770.00	974.48	4.00	143.00	9.27
"UpdatesNumber"	4.19	1.00	0.00	0.00	80.00	6.34	0.00	7.00	3.04
"CommentsNumber"	103.92	1.00	0.00	0.00	10870.00	436.49	0.00	48.00	13.58
"FAQsNumber"	3.56	0.00	0.00	0.00	86.00	6.72	0.00	5.00	3.43
"WordsNumber"	1025.54	867.00	720.00	24.00	8981.00	724.59	549.00	1293.00	2.44
"VideosNumber"	4.78	2.00	0.00	0.00	54.00	6.61	0.00	8.00	1.94
"ImagesNumber"	17.73	10.00	0.00	0.00	113.00	19.91	2.00	20.00	1.34
"FundingGoal"	62455.08	12500.00	10000.00	1.00	13495854.00	383463.50	5000.00	40000.00	25.30
"Duration"	37.51	30.00	30.00	2.00	60.00	13.04	30.00	45.00	0.61
"RewardTiers"	5.79	5.00	4.00	1.00	48.00	4.23	3.00	7.00	3.02
"PreviouslyCreated"	1.95	1.00	1.00	0.00	47.00	2.98	1.00	2.00	6.63
"PreviouslyBacked"	2.08	0.00	0.00	0.00	129.00	7.95	0.00	1.00	7.87

4.2 Correlation Analysis and the Multicollinearity Issue

Table 3 presents the correlation matrix, including the three dependent variables, six independent variables and five control

variables. For FundingSuccess, updates number (0.6252) and ImagesNumber (0.6420) indicate a strong positive correlation, FAQs number (0.4218) and videos number (0.5815) indicate a moderate positive correlation, and comments number (0.2651) and words number (0.1588) indicate a weaker positive

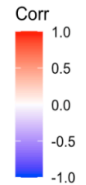
correlation compared to other variables. For FundingRatio, comments (0.5250), updates (0.3330) and images (0.3145). Videos (0.2819) and FAQs (0.2724) indicate a bit weaker positive correlations. Words number (0.0504) indicate a very low positive correlation with FundingRatio. For the BackersNumber variable, comments number (0.6318) has the strongest positive correlation, followed by updates (0.3731), FAQs (0.3280), images (0.3184), videos (0.2748) and words number (0.0776). The correlation matrix indicates that more updates, comments, FAQs, words in the description, videos and images are associated with a higher funding succes, funding ratio and an increased number of backers.

The correlation matrix presents some moderate to strong correlations between several combinations of variables, indicating a possible multicollinearity issue. For instance, the correlation coefficient between ImagesNumber and VideosNumber is 0.7495, which is close to the 0.8 to 0.9 range that according to *Mason and Perreault (2013)* indicates collinearity. However, *Chan et al. (2022)* state that correlations do not necessarily mean multicollinearity, recommending tests

like Variation Inflation Factor (VIF) and Tolerance (TOL). The two tests are performed to determine whether a problem of multicollinearity is present. The VIF test shows how much multicollinearity inflates the variance of the coefficient estimates (*Midi et al., 2010*). A VIF above five indicates an issue with multicollinearity (*Tosatto et al., 2022*). However, according to *Midi et al. (2010)*, VIF values above 2.5 in weaker models may indicate an issue. The test results displayed mostly values under 2.5, except for the ImagesNumber variable, which had a VIF of 3.06. The Tolerance test indicates a little multicollinearity with values close to 1, and higher multicollinearity with values close to 0, with a tolerance of 0.1 and less being of concern (*Midi et al., 2010*). The test results displayed values between 0.33 and 0.80, with 0.33 being for the ImagesNumber variable. The results of the two tests are displayed in Table D in Appendix. One of the solutions proposed by *Midi et al. (2010)* to the problem of multicollinearity, is to remove the highly correlated variable ImagesNumber from the analysis.

Table 3: Correlation Matrix

	Funding Success	Funds Raised	Funding Ratio	Backers Number	Updates Number	Comments Number	FAQs Number	Words Number	Videos Number	Images Number	Funding Goal	Duration	Reward Tiers	Previously Created	Previously Backed
Funding Success	1.0000														
Funds Raised	0.2021***	1.0000													
Funding Ratio	0.2619***	0.2575***	1.0000												
Backers Number	0.2957***	0.2936***	0.4585***	1.0000											
Updates Number	0.6252***	0.2487***	0.3330***	0.3731***	1.0000										
Comments Number	0.2651***	0.3934***	0.5250***	0.6318***	0.3673***	1.0000									
FAQs Number	0.4218***	0.2516***	0.2724***	0.3280***	0.4215***	0.3439***	1.0000								
Words Numbers	0.1588***	0.0703**	0.0504*	0.0776***	0.2558***	0.0697**	0.2079***	1.0000							
Videos Number	0.5815***	0.2651***	0.2819***	0.2748***	0.4614***	0.3021***	0.4820***	0.2142***	1.0000						
Images Number	0.6420***	0.2831***	0.3145***	0.3184***	0.5083***	0.3517***	0.5596***	0.2874***	0.7495***	1.0000					
Funding Goal	-0.0429	0.1833***	-0.0210	-0.0087	0.0084	-0.0056	-0.0053	0.0156	-0.0363	-0.0171	1.0000				
Duration	-0.1529***	0.0384	0.0166	0.0064	-0.0600**	0.0512*	0.0372	-0.0536*	-0.0324	-0.0522*	0.0124	1.0000			
Reward Tiers	0.2994***	0.1344***	0.2397***	0.1855***	0.3423***	0.1932***	0.2313***	0.2871***	0.2462***	0.3608***	0.0203	-0.0405	1.0000		
Previously Created	0.2169***	0.0010	0.0619**	0.0940***	0.1467***	0.0378	0.0143	0.0407	0.0336	0.0850***	-0.0339	-0.1272***	0.0848***	1.0000	
Previously Backed	0.1933***	0.0003	0.0444	0.1111***	0.1936***	0.0615**	0.1063***	0.1104***	0.0600**	0.1114***	-0.0268	-0.0993***	0.1779***	0.3239***	1.0000



Note: *** p < 0.001, ** p < 0.01, * p < 0.05

4.3 Regression Analysis

To answer the research question and test the hypotheses, the following regression equation is proposed:

$$\begin{aligned}
 \text{FundingSuccess}_i = & \beta_0 + \beta_1 \log(\text{UpdatesNumber}_i + 1) + \\
 & \beta_2 \log(\text{CommentsNumber}_i + 1) + \\
 & \beta_3 \log(\text{FAQsNumber}_i + 1) + \\
 & \beta_4 \log(\text{WordsNumber}_i) + \\
 & \beta_5 \log(\text{VideosNumber}_i + 1) + \\
 & \beta_6 \log(\text{ImagesNumber}_i + 1) + \\
 & \beta_7 \log(\text{FundingGoal}_i) + \\
 & \beta_8 \text{Duration}_i + \\
 & \beta_9 \log(\text{RewardTiers}_i) + \\
 & \beta_{10} \log(\text{PreviouslyCreated}_i + 1) + \\
 & \beta_{11} \log(\text{PreviouslyBacked}_i + 1) + \\
 & \beta_{12} \text{Country}_i + \epsilon_i
 \end{aligned}$$

To obtain a more comprehensive view of the different dimensions of success, similar to *Chen (2022)*, three additional equations with alternative measures of success are proposed: FundsRaised, FundingRatio and BackersNumber.

In the content of the specific research, a logistic regression analysis is conducted. This approach was used by *Mollick (2014)*, where the author researched the reasons why some projects succeed and others fail on crowdfunding platforms such as Kickstarter. *Mollick (2014)* used logistic regression to examine how variables such as project goal, duration, spelling errors, and other factors affected the likelihood of the project's success. Similarly, *Koch and Siering (2015)*, in their paper used logistic regression to identify which factors contribute to the successful funding of projects.

The regression analysis allows us to test the effect of certain independent variables on the four dependent variables using Rstudio. For each equation, three models are proposed. Model 1 will test the effect of control variables on the dependent variables. Model 2 will test the combined effect of independent and control variables on the dependent variable. Model 3 will

test the effect of both independent and control variables excluding the ImagesNumber variable

	FundingSuccess			Log(FundsRaised + 1)			Log(FundingRatio + 1)			Log(BackersNumber + 1)		
	M1	M2	M3	M1	M2	M3	M1	M2	M3	M1	M2	M3
Variables												
Intercept	0.562 (0.387)	0.875*** (0.254)	0.838** (0.255)	2.183 (3.011)	4.175* (1.942)	3.592 (1.982)	4.038 (2.133)	6.153*** (1.075)	5.857*** (1.093)	-0.350 (1.618)	1.267 (0.795)	1.143 (0.799)
Independent												
log(UpdatesNumber + 1)		0.192*** (0.009)	0.194*** (0.009)		0.877*** (0.071)	0.913*** (1.982)		0.640*** (0.039)	0.659*** (0.040)		0.332*** (0.029)	0.340*** (0.029)
log(CommentsNumber + 1)		0.060*** (0.005)	0.063*** (0.005)		0.529*** (0.039)	0.569*** (0.040)		0.555*** (0.022)	0.576*** (0.022)		0.582*** (0.016)	0.591*** (0.016)
log(FAQsNumber + 1)		-0.001 (0.007)	0.002 (0.007)		0.154** (0.052)	0.199*** (0.053)		0.080** (0.029)	0.103*** (0.029)		0.032 (0.021)	0.041 (0.021)
log(WordsNumber)		-0.035*** (0.009)	-0.028** (0.009)		0.020 (0.069)	0.111 (0.069)		-0.068 (0.038)	-0.022 (0.038)		-0.034 (0.028)	-0.014 (0.028)
log(VideosNumber + 1)		0.034*** (0.009)	0.056*** (0.008)		0.435*** (0.069)	0.725*** (0.062)		0.286*** (0.038)	0.433*** (0.034)		0.080** (0.028)	0.142*** (0.025)
log(ImagesNumber + 1)		0.037*** (0.007)			0.489*** (0.055)			0.248*** (0.030)			0.105*** (0.022)	
Control												
log(FundingGoal)	-0.066*** (0.006)	-0.047*** (0.004)	-0.048*** (0.004)	0.030 (0.045)	0.155*** (0.030)	0.134*** (0.030)	-0.530*** (0.032)	-0.436*** (0.016)	-0.447*** (0.017)	-0.057 (0.024)	-0.001 (0.012)	-0.005 (0.012)
Duration	-0.002* (0.001)	-0.001** (0.000)	-0.002*** (0.000)	-0.004 (0.005)	-0.002 (0.003)	-0.004 (0.004)	-0.006 (0.004)	-0.005** (0.002)	-0.006*** (0.002)	-0.002 (0.003)	-0.002 (0.001)	-0.003* (0.001)
log(RewardTiers)	-0.19*** (0.013)	0.005 (0.010)	0.016 (0.009)	2.394*** (0.130)	0.372*** (0.094)	0.553*** (0.093)	1.674*** (0.092)	0.147** (0.052)	0.238*** (0.051)	1.285*** (0.070)	0.230*** (0.038)	0.269*** (0.038)
log(PreviouslyCreated + 1)	0.133*** (0.022)	0.014 (0.014)	0.018 (0.014)	0.910*** (0.169)	0.080 (0.110)	0.130 (0.112)	0.929*** (0.120)	0.219*** (0.061)	0.244*** (0.062)	0.687*** (0.091)	0.101*** (0.045)	0.112* (0.045)
log(PreviouslyBacked + 1)	0.115*** (0.011)	0.013 (0.008)	0.015 (0.008)	0.898*** (0.089)	-0.102 (0.059)	0.125* (0.060)	0.659*** (0.063)	0.038 (0.033)	0.050 (0.033)	0.571*** (0.048)	0.113*** (0.024)	0.118*** (0.024)
Country	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Multiple R-squared:	0.436	0.769	0.765	0.465	0.787	0.778	0.521	0.884	0.879	0.370	0.869	0.868
Adjusted R-squared:	0.420	0.762	0.758	0.450	-0.781	0.771	0.507	0.880	0.876	0.353	0.865	0.864
Number of Observations:	1912	1912	1912	1912	1912	1912	1912	1912	1912	1912	1912	1912
Significance Codes:	*** p < 0.001; ** p < 0.01; * p < 0.05											

Based on the results from the regression analyses, several observations can be made about the statistical significance of independent variables. Updates, comments, videos, and images positively impact FundingSuccess, FundatingRatio, and BackersNumber across all models. Longer descriptions do not significantly contribute to the campaign's success, and the negative coefficients suggest that longer description negatively affect a campaign. Moreover, the number of FAQs does not significantly influence FundingSuccess but positively affects FundingRatio and BackersNumber in most models. From control variables, funding goal, and duration both have a negative effect on crowdfunding success across all models. This could indicate that higher goals are harder to achieve. However, the number of rewards and the author's experience in creating and backing projects positively influence the success chance in most models.

The economic significance can be further analyzed based on the results provided by the analysis. Increasing updates by 1 unit increases the success probability by 0.192-0.194%, funds raised by 0.877-0.913%, funding ratio by 0.640-0.659%, and backers by 0.332-0.340%. Block et al. (2017) found a 1.01 increase in backers on the same day. Tafesse (2021) reporter a 10.6% increase in success chance with each additional update. A unit increase in comments increases success probability by 0.060-0.063%, funds by 0.529-0.576%, funding ratio by 0.550-0.591%, and backers by 0.582-0.591%, while Tafesse (2021) found a decrease of 0.1% in probability of success. A 1 unit increase in FAQ entries decreases the project succes with 0.1% and increases by 0.2% in Model 2, raise funds by 0.154-0.199%, increases funding ratio by 0.080-0.103%, and number of backers by

0.032-0.041%. Tafesse (2021) found a 2% decrease in success with each additional FAQ. A one unit increase in the number of words in project decsription reduce success probability by 0.028-0.035%, while Tafesse (2021) found no effect - 0%. Tosatto et al. (2022) reported a 0.0557% increase in the number of backers. One additional video increases the success probability by 0.034-0.056%, funds by 0.435-0.725%, funding ratio by 0.286-0.433%, and backers by 0.080-0.143%. Tafesse (2021) found a 7% increase and Tosatto et al. (2022) found a 0.9672% increase in the number of backers. Increasing images by one unit increases success probability by 0.037%, funds by 0.489%, and backers by 0.105%. Tafesse (2021) found a 1.4 % increase in the project success chance due to one additional image. For the control variables, a 1 unit increase in the funding goal, decreases the probability of success by 0.047-0.066%, and raised by 0.155%, the funding ratio by 0.436-0.530%. and the number of backers by -0.1-0.5%. A 1 increase in the project duration decreases the probability of success by 0.001-0.002%, funding ratio by 0.005-0.006%, number of backers by 0.002-0.003%. A 1 unit increase in the number of reward tiers decreases the probability of success by 0.019%, increases the funding ratio by 0.238-0.553%, increases funds raised by 2.394%, and increases the number of backers by 1.285-1.674%. Tafesse (2021) found that 1 unit increase is associated with 1% increase in success chance. A 1 unit increase in previously created projects increases the probability of success by 0.014-0.133%, funding ratio by 0.244-0.929%, e number of backers by 0.101-0.219%. A 1 unit increase in previously backed projects increases the probability of success by 0.013-0.115%, has no significant effect on the funding ratio, and increases the number of backers by 0.038-0.659%.

Based on the result, we conclude the following about the hypotheses:

Hypothesis	Acceptance
H1: There is a positive relationship between the number of updates posted by entrepreneurs and the project's success.	Accept
H2: There is a positive relationship between the number of comments and the project's success.	Accept
H3: There is a positive relationship between the number of FAQ entries and the project's success.	Reject
H4: There is a positive relationship between the number of words in the project description and the project's success.	Reject
H5: There is a positive relationship between the inclusion of videos in the project description and project success.	Accept
H6: There is a positive relationship between the number of pictures in the project description and the project's success.	Accept

5. INDUSTRY IMPLICATIONS

This research on communication strategies on crowdfunding platforms has several implications for entrepreneurs, investors, and crowdfunding platforms.

Entrepreneurs need to actively focus on maintaining communication with their investors, meaning that they have to regularly update them, respond to comments, include detailed FAQ entries, and use visual content such as images and videos to present their products. If entrepreneurs manage to maintain good communication with the investors, the chance of successfully funding their campaigns will increase, creating a positive image and building trust and transparency. Moreover, the entrepreneur should pay attention to the desired funding goal and campaign duration. Higher funding goals negatively affect success rates together with duration. This could indicate that shorter campaigns tend to encourage a faster decision-making process from investors. The number of rewards is another aspect to be considered. A higher number of reward levels are associated with higher success, yet, more diverse rewards can require more effort and costs. In conclusion, entrepreneurs should focus on different multimedia options and regular updates, maintain transparent and frequent communication, set realistic funding goals, optimize campaign durations, and develop a diverse set of rewards.

Investments in crowdfunding projects can bring benefits but can also bring risks. As such, it is important for investors to carefully examine a project before deciding to fund it. Investors should look for projects that provide frequent updates, indicating that the entrepreneur is actively managing the campaign, check for positive and negative comments, and whether the creator tends to give a fast response to questions, and look for the FAQ section, which can indicate whether the entrepreneur has spent time on trying to anticipate potential concerns and is willing to provide additional details. Furthermore, it is important to check whether the project has images or videos presenting the product, which could help assess how the final product will look, how it will function and what is the development stage. Additionally, investors can look for the entrepreneur's background on the platform by checking

the number of created and backed by the entrepreneur's projects. Creator with successful past projects is more likely to finalize their campaigns and deliver the promised reward. Lastly, it is of great importance for the investor to continuously monitor the progress.

Crowdfunding platforms play an important role in crowdfunding projects, and as such, platforms can enhance their features and tools for communication, to aid entrepreneurs and investors. Crowdfunding platforms can simply be the process of posting updates, such as adding templates or giving the possibility to schedule a post. Moreover, they can ensure that the platform easily supports higher quality or longer videos and images. Additionally, platforms can improve their analytical tool and offer data to both entrepreneurs and investors. The platform can create guides and tutorials for entrepreneurs, to help them assess what are the best practices for running a crowdfunding campaign. Lastly, platforms can encourage more transparency by implementing a more rigorous verification process for entrepreneurs. By checking identity and background data, the platform can build a sense of trust for the investors.

6. LIMITS AND FUTURE RESEARCH

This study has several limitations could impact the validity and generalizability of the results. Firstly, the technology sector is quickly evolving, making the findings outdated as new communication tool and AI systems are created. Secondly, the study focuses mainly on a single platform - Kickstarter, which uses a reward-based and all-or-nothing funding model. This limits the findings from being used to platforms that are based on a different crowdfunding type (donation, equity, debt-based) or on a keep-it-all funding model. Moreover, the study does not consider external factors such as social media platforms, which can have a significant influence on the crowdfunding success. Additionally, the dataset created for the analysis, does not include projects that are canceled, deleted or relaunched, which could result in a selection bias. Lastly, the data for each project was entered manually, being prone to human error. Despite the accuracy check, it could contain significant errors, such as extreme values, that could change the results.

Based on the limitations of the research, several areas can be studied in future research. First, future research can make a comparison of different crowdfunding platforms and types, which would allow to analyze whether similar communication factors influence differently an equity, debt, or donation-based crowdfunding campaign. Furtherer, studies can focus on a detailed examination on how different emerging technologies such as virtual reality, can be successfully integrated into projects, and how it can impact the outcome. Lastly, a detailed analysis on how external communication strategies affect the crowdfunding success can be conducted. This could increase the generalizability of the findings

7. CONCLUSION

This paper examines how diverse communication factors from crowdfunding platforms affect the success of crowdfunding campaigns. The findings are based on data from 1,913 projects from the technology category projects from 2023 from Kickstarter, allowing for a better understanding of the latest trends and practices in the crowdfunding market. The study investigates the effect of updates, comments, FAQ entries, description length, videos and images. The study offers valuable insights for entrepreneur and investors primarily, but can also be considered by crowdfunding platforms. This thesis also provides practical advices for the three parties on how to use communication strategies in the best way.

8. APPENDICES

Table 1. Overview of Related Studies on the Different Types of Communication in Crowdfunding Campaigns			
Author	Relevant Findings	Platform	Sample Size
Mollick (2014)	Quick updates: Within three days of launch, significantly increase success (coefficients: 2.69 to 2.73, $p < 0.01$). Including a video: Strongly predicts success (coefficients: 4.26 to 4.30, $p < 0.01$).	Kickstarter (Reward-Based)	48,526 projects from 2009 to July 2012
Xiao et al. (2014)	Updates: Positive and highly significant (OLS: 0.8388; 2SLS: 0.8049; GMM: 0.8022). Comments: Positive and highly significant (OLS: 0.6222; 2SLS: 0.6536; GMM: 0.6628). Project description length: Positive and significant (OLS: 0.2999; 2SLS: 0.3139; GMM: 0.3534). Number of images: Close to zero and not significant (OLS: -0.0026; 2SLS: 0.0025; GMM: 0.0039). Presence of a video: Positive and highly significant (OLS: 1.0842; 2SLS: 1.0967; GMM: 1.0929).	Kickstarter (Reward-Based)	802 projects from April 2009 to July 2012
Xu et al. (2014)	Social promotion updates are most impactful in the initial phase, progress reports in the middle phase, and new reward updates in the final phase. Updates like new content, reminders, answering questions, and appreciation do not significantly depend on timing.	Kickstarter (Reward-Based)	8,529 projects between March 19, 2013 and May 17, 2013
Kunz et al. (2016)	Each additional update increases the odds by about 22.9%. Each additional video increases the odds by about 5.1%. The number of images used is negatively associated with success, reducing the odds by about 3%. Each additional FAQ increases the odds by about 7.4%. Each unit increase in the log of description word count increases the odds by about 57.6%.	Kickstarter (Reward-Based)	54,913 projects from April 21, 2009 and July 20, 2014
Kim et al. (2017)	Moderate positive correlation between the Number of Updates and Success Ratio ($p = 0.364$, p -value < 0.001). The number of comments showed a moderate correlation with Success Ratio ($p = 0.226$, p -value < 0.001). Weak to moderate positive correlation between Description Elaborateness and Success Ratio. ($p = 0.189$, p -value < 0.001).	Kickstarter (Reward-Based)	116,956 projects from November 1, 2015 and September 15, 2016
Lai et al. (2017)	Early updates and comments are very critical to the funding success.	Kickstarter (Reward-Based)	88,211 projects from June 2, 2009
Zhou et al. (2018)	For every 1 % increase of length, the log odds of funding success increases by 0.38.	Kickstarter (Reward-Based)	151,752 from 2009 to November 2014
Lagazio and Querci (2018)	Updated campaign page: Increases probability of success by 5%. Longer descriptions (>500 words) increase success probability by 13% compared to shorter descriptions (<200 words). Video introduction: Reduces funding chances by 5%, regardless of text presentation. Comments: Marginal effect on success probability (p -value < 0.05).	Indiegogo (Reward-Based)	1,507 projects from January 2014 and December 2015
Wang et al. (2018)	Weak positive correlation between the number of updates and the success of the project (0.050). Significant positive correlation between the quality of comments and project success (0.127). Weak positive correlation between including a video in the project and its success (0.046). Weak negative correlation between the number of images in the project and its success (-0.046).	Dreamore (Reward-Based)	959 projects from September 10, 2011 and February 28, 2015
Koch and Siering (2019)	Moderate positive correlation between the number of words in the text and the success (0.22). Moderate positive correlation between the number of pictures included in the project and its success	Kickstarter (Reward-Based)	1,000 projects, latest finished on October 10, 2014
Telve (2019)	Each additional updates is associated with a 0.101 unit increase in funding ($p < 0.001$). Number of comments: No significant impact on funding (-0.0001). Each additional FAQ is associated with a 0.014 unit increase in funding ($p < 0.05$). Number of images: No significant impact on funding (-0.003). Each additional video is associated with a 0.043 unit decrease in funding ($p < 0.01$). Logarithm of description word count: Associated with a 0.097 unit increase in funding ($p < 0.001$).	Kickstarter (Reward-Based)	7,871 projects from December 2013 and June 2014
Tafesse (2021)	Number of updates: Positively associated with the outcome (0.106, $p < 0.001$). Number of photos: Positively associated with the outcome (0.014, $p < 0.001$). Number of videos: Positively associated with the outcome (0.07, $p < 0.01$). Number of comments: Negatively associated with the outcome (-0.001, $p < 0.001$). Number of FAQs: Negatively associated with the outcome (-0.020, $p < 0.01$).	Kickstarter (Reward-Based)	8,027 projects from end of 2018 and end of 2019
Wachira and Wachira (2021)	Weak positive correlation between FAQ and successful projects ($r = 0.190$, $p < 0.001$) Very strong positive correlation between updates and successful projects ($r = 0.528$, $p < 0.001$) Moderate positive correlation between comments and successful projects ($r = 0.314$, $p < 0.001$)	Kickstarter (Reward-Based)	173 projects

Variable	Mean with Outliers	Mean without Outliers	Variance with Outliers	Variance without Outliers
"FundingSuccess"	0.44	0.44	0.25	0.25
"FundsRaised"	243666.90	10825.78	181222000000.00	462739378.00
"FundingRatio"	862.35	141.26	13430754.00	64727.14
"BackersNumber"	266.41	46.41	949614.20	5597.19
"UpdatesNumber"	4.19	3.37	40.21	20.07
"CommentsNumber"	103.92	13.04	190523.70	718.34
"FAQsNumber"	3.56	1.89	45.22	10.89
"WordsNumber"	1025.54	917.61	525023.70	252307.70
"VideosNumber"	4.78	3.96	43.76	25.74
"ImagesNumber"	17.73	16.03	396.57	296.17
"FundingGoal"	62455.08	19676.73	147044252806.00	449946178.00
"Duration"	37.51	37.66	169.92	165.76
"RewardTiers"	5.79	5.21	17.88	7.65
"PreviouslyCreated"	1.95	1.27	8.90	0.30
"PreviouslyBackerd"	2.08	0.17	63.16	0.23

Country	Count	Frequency	Country	Count	Frequency	Country	Count	Frequency
Africa	1.00	0.05	Indonesia	1.00	0.05	Serbia	1.00	0.05
Australia	57.00	2.98	Ireland	5.00	0.26	Singapore	23.00	1.20
Austria	14.00	0.73	Israel	4.00	0.21	Slovenia	6.00	0.31
Belgium	8.00	0.42	Italy	51.00	2.67	South Korea	15.00	0.78
Canada	102.00	5.33	Japan	20.00	1.05	Spain	48.00	2.51
China	21.00	1.10	Lithuania	1.00	0.05	Sweden	9.00	0.47
Czech Republic	3.00	0.16	Luxembourg	2.00	0.10	Switzerland	24.00	1.26
Denmark	7.00	0.37	Malaysia	3.00	0.16	Taiwan	4.00	0.21
Ecuador	1.00	0.05	Mexico	20.00	1.05	Thailand	1.00	0.05
Estonia	1.00	0.05	Netherlands	19.00	0.99	Tunisia	2.00	0.10
France	53.00	2.77	New Zealand	9.00	0.47	Turkey	2.00	0.10
Germany	96.00	5.02	Norway	10.00	0.52	United Arab Emirates	1.00	0.05
Greece	6.00	0.31	Pakistan	1.00	0.05	United Kingdom	161.00	8.42
Hong Kong	235.00	12.29	Poland	21.00	1.10	United States	832.00	43.51
Hungary	2.00	0.10	Portugal	3.00	0.16	Venezuela	1.00	0.05
India	3.00	0.16	Qatar	1.00	0.05	Vietnam	1.00	0.05

Variables	VIF	TOL
UpdatesNumber	1.80	0.56
CommentsNumber	1.34	0.75
FAQsNumber	1.63	0.61
WordsNumber	1.20	0.83
VideosNumber	2.45	0.41
ImagesNumber	3.06	0.33
FundingGoal	1.03	0.97
Duration	1.06	0.94
RewardTiers	2.21	0.45
PreviouslyCreated	1.21	0.83
PreviouslyBacked	1.25	0.80

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