

Master Thesis

MSc Business Administration – Entrepreneurship, Innovation & Strategy

To what extent does temporal focus in idea formulation affect crowdfunding project success?

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Abstract

This paper studies the relationship between temporal focus in idea formulations and the evaluation of those ideas. The temporal focus construct consists of three different foci: past, present and future focus. Another expression for temporal focus is subjective time, which means that individuals have different perceptions of the past, present and future. Since prior literature increasingly agreed upon temporal focus having an essential influence on an individual's life, the different perceptions of the past, present and future lead to different decisions and behaviours by individuals in different situations. This study follows the deductive approach. Based on the literature review and the current state of the research domains of idea evaluation and biases we expect the present and future focus to have a positive effect on idea evaluation and the past focus to have a negative effect. We entered the crowdfunding context to study the effects. A dataset with 20,632 Kickstarter campaign ideas drawn from Kickstarter was chosen. The Linguistic Inquiry and Word Count program analyzed the degree of the three temporal foci used in the idea descriptions. Then, the file was analyzed in SPSS and the resulting regressions showed the effects. The first regression we conducted was a binary logistic regression with the dichotomy variable if the campaign was successful or failed as the outcome variable. Secondly, a linear multiple regression with the amount of money pledged as the dependent variable and thirdly, a negative binomial regression with the number of backers as the dependent variable were conducted. Overall, the present focus has the most beneficial effect although the temporal focus construct in general has a negative effect on idea evaluation. The present focus consistently has the least negative effect. Additionally, we found that the exposure boost granted by Kickstarter employees to some campaigns significantly affects the project's success. The majority of the boosted campaigns have the present focus as the dominant focus. This research adds to the existing literature in that it analyses the effect of temporal focus in idea formulations on idea evaluation, and, expands the list of studied cognitive biases in the crowdfunding context.

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1. Introduction

Idea evaluation is essential for innovation activities. Despite the importance of innovation and a sound evaluation of ideas, there exists a broad range of evaluation biases in innovation activities. Generally, biases describe the systematic effect on evaluations or ratings of the object independent of the true quality of the object which is being evaluated or rated (Blackburn & Hakel, 2006). One example of a bias is the tendency to evaluate ideas lower that belong to one's own skills or originate outside the business. The degree of idea novelty significantly opens room for biases (Schweisfurth et al. 2017). The accuracy of idea evaluation suffers if the idea is generally outside the knowledge domain (Ozer, 2005). As Schweisfurth et al. (2017, p. 1) state, it is generally recognized that “(...) idea evaluations can be influenced by information unrelated to idea quality.”

An idea is an opportunity to create value when seizing it. Ideas could originate from the rise of a new need, a solution to an already existing need, or the idea could be the connection between an existing solution for a new need (Kornish and Ulrich, 2014). The evaluation of ideas is one part of the idea management process. Additionally, it includes the generation of ideas, idea gathering, and after the evaluation the idea development, implementation, and the follow-up and rewarding phase. Evaluation is a critical step in this process (Stevanovic et al. 2015). Kornish and Ulrich (2014) also found that the raw idea matters in terms of market success. The follow-up processes are as important as the idea, but the true quality of the raw idea is essential in predicting success too. This highlights the importance of an appropriate evaluation and selection of ideas because even perfectly conducting the follow-up processes will not guarantee success if the raw idea does not have the required quality.

In the last few decades crowdfunding got increasing attention as a new and relevant financing mechanism by investors and scholars (Lukkarinen et al., 2017). Crowdfunding as a new financial mechanism contributes to the increasing competition for traditional financing methods like, for example, venture capitalists or banks (Hoegen et al. 2017). Chakhar et al. (2020) even attach the potential to “revolutionize” the funding processes to the crowdfunding mechanism. A supporting factor is the reduction of barriers to access generated by the democratic nature of this mechanism. Adding to this, Chakhar et al. (2020) express the potential of crowdfunding to increase entrepreneurship in developing economies.

The reduction of barriers accelerates the growth of crowdfunding which also mirrors the expansion of the research literature about crowdfunding. This trend stresses the need to create a more holistic understanding of the processes and success criteria in decision-making (Hoegen et al. 2017). Yet the research domain regarding the crowdfunding phenomena, especially aspects like decision-making processes of crowd investors and applied investment criteria, lack robust literature and frameworks (Shafi, 2021). One reason for this is that funding over the internet via the crowd increases dynamics in this financial mechanism which is not well understood yet (Ahlers et al., 2015). This makes the project success for project founders challenging. Additionally, the general findings on professional investors are not appropriate to generalize to the crowd. The inability to generalize those findings is justified by the fact that crowdfunding investors do not use as many sophisticated resources as professional investors. The small stake and return of investing in crowdfunding projects do not justify comparable complexity in the evaluation process too (Ahlers et al., 2015). Therefore, crowdfunding investors rely on simpler heuristics (Shafi, 2021) which opens space for potential unknown cognitive influences (Hoegen et al. 2017). Spaeth and Moysidou (2016) found that affective and cognitive features influence the decision-making of crowdfunding investors.

A potential cognitive feature that influences decision-making in the crowdfunding context is subjective time, also called temporal focus. The distinction between objective and subjective time is becoming increasingly popular in research about temporal issues for individuals, groups, and organizations. Objective time refers to the actual time that passes forth whereas subjective time refers

to individual perceptions of time (Shipp et al. 2009). Subjective time is different for individuals due to different perceptions of the past, present, and future (Bluedorn, 2002; Shipp et al, 2009). Back et al. (2020) acknowledged that temporal focus has been studied increasingly in management research but has often focused on only one temporal focus. The ignorance of the coexistence of temporal foci created burdens towards findings about the temporal focus construct, for example in its variability and contingency upon situations. Shipp et al. (2009) also stress that people can have multiple temporal foci to varying degrees. Shipp and Aeon (2019) go further and describe temporal focus as a profile that can attach several, either balanced or unbalanced, focus categories to individuals. Not only are the three known foci at play separately, but also the possibility of having a multi-focus or no focus at all. The emphasis on a specific temporal focus leads to a stable cognitive frame that influences decisions in the present. Once a temporal focus becomes stable one could describe this cognitive feature as a “temporal bias” (Zimbardo and Boyd, 1999; Mohammed & Nadkarni, 2011).

Subjective time is the most essential part of the time in terms of giving meaning to everyone’s life with all its aspects like work or leisure time (Shipp and Jansen, 2021). That is why the role of time, specifically subjective time, got increasing attention in the past due to its recognized influence in general and in many business-related aspects. For example, executives’ time perceptions are increasingly getting attention for strategic areas of a firm (Nadkarni & Chen, 2014). Several authors describe this time perception as a filter that is the basis for executives' decisions in terms of, for example, resource allocation or timing and urgency of activities (Nadkarni & Chen, 2014; Rabinovich & Morton, 2012). More specifically, the temporal focus becomes more popular in strategic decision-making due to the following aspects being essential: past knowledge, real-time information, and future speculations (Nadkarni & Chen, 2014).

As Shipp & Jansen (2021) express, the field of subjective time, here temporal focus, although gaining increasing attention in the past, lacks profound and validated literature across research domains. Moreover, in terms of organizational behavior and decision-making, we do know little about the role of temporal focus in this research stream. Therefore, the assumption that temporal focus is not well situated within this domain has substance. The concept’s relation to and with other organizational behavior variables is unclear (Shipp et al., 2009). Nevertheless, international research acknowledged the increasing importance of temporal focus by studying this construct’s effects on several individuals, groups, and organizational aspects (Diotaiuti et al. 2021).

Moreover, Falchetti (2022) states that research on temporal focus within the organization has almost exclusively investigated the impact on idea generation and top executives' strategic decision-making. She proposes future research to measure the effect of temporal focus in idea descriptions on idea evaluation. Research has already partially identified the role of temporal focus in some individuals' decision-making activities. Still, it has not been studied what role temporal focus in textual information plays and how it affects individuals reading this.

Some numbers show the importance of shedding light on the decision-making processes and influences of crowdfunding investors. Lukkarinen et al. (2017) state that success factors for crowdfunding projects need to be identified to increase the project success rate. Overall, among several crowdfunding platforms, the success rate is rather low at 30%. It is stressed that current knowledge about project success factors and idea evaluation criteria of investors is limited. Next to that, the platform Kickstarter has 36% of ideas being successfully funded as projects. Not only do the idea generators desire successful funding via the platform, but also the platform has an interest in more successful projects as it attracts more participants to this platform (Koch & Siering, 2019).

As indicated, temporal focus research is not yet well established and the status quo of crowd investors, using simple heuristics leading to the possible inclusion of cognitive biases, creates a fit for synthesizing these research streams. Falchetti (2022) already proposed to investigate the effect of temporal focus in idea descriptions. To study if the temporal focus in idea formulations influences idea evaluation, we enter the context of crowdfunding. Since the presence of temporal foci has a major influence on an individual’s personality and therefore decision-making, the investigation of a

“temporal bias” adds significant value to the understanding of crowd investors’ decision-making. Thus, idea generators submitting ideas on crowdfunding platforms have a higher awareness of how the idea description attracts investors. Crowd investors, on the other hand, are aware of the non-quality related biases, amongst others the temporal bias, and can evaluate more accurately through their cognitive frame. Therefore, shedding light on the role of temporal foci on idea evaluation in the crowdfunding context potentially leads to more and better ideas to succeed. That is why we integrate temporal focus research with crowdfunding research. Specifically, we study the effect temporal focus in idea formulation has on project success on a crowdfunding platform. As already indicated, the nascent literature stream on crowdfunding and potential project success factors create a challenging situation for project founders and idea generators in terms of how to best sell their ideas. In other words, to receive as much money pledged on the idea as possible or ideally achieve the funding goal. Furthermore, crowdfunding success has important value for entrepreneurial activities, especially in developing countries (Chakhar et al., 2020).

To achieve the desired contributions this paper will be guided by the following research question: “To what extent does temporal focus in idea formulation affect crowdfunding project success?”

2. Theory

2.1 Temporal focus

Several authors define temporal focus as a time construct that describes peoples’ thinking about the past, present, and future. The temporal lens people use is a decisive factor for individual differences in, for example, behaviors and attitudes (Bluedorn, 2002; Falchetti, 2022; Shipp et al. 2009). This is due to time perspectives being deeply rooted within individuals. Previous research, at least partially, suggests that the three temporal foci provide separate options of which only one applies to individuals. In contrast, the number of studies that propose that people can have different temporal foci and that the allocation can be devoted to varying degrees to all of them increases (Shipp et al., 2009; Zimbardo & Boyd, 1999). There can be situational aspects that lead people to change their attention toward either the past, present, or future. This means that during the day people can shift temporal attention several times (Shipp et al. 2009). Nevertheless, Zimbardo and Boyd (1999) state that continuous attention toward one temporal focus will lead to a stabilized character trait. The resulting characteristic is the temporal focus. The stable temporal focus characteristic of an individual has far-reaching influences like childhood experiences, the culture of the country, and family influences like parental beliefs and status.

The importance of temporal focus is increasingly recognized by prior literature and the main reason is the essential influence of this cognitive aspect on the life of individuals. The “subjective time” is the lens through which people decide, act and behave and, thus, moderates the quality of life depending on the actual focus individuals primarily use (Shipp and Jansen, 2021). Awareness of the impact temporal focus has on individuals makes the connection to business-related mechanisms not surprising. Temporal focus is important because research on goal setting, motivation, and performance revealed that temporal focus affects attitudes, behaviors, and decision-making (Shipp et al, 2009). Furthermore, the cognitive construct already has been subject to studies examining the role of temporal focus in businesses (Nadkarni & Chen, 2014; Rabinovich & Morton, 2012).

2.1.1 Past focus

Shipp et al. (2009) found that past-focused people, in contrast to current- and future-focused people, tend to be more negative as the past focus is said to relate to neuroticism and negative affectivity. This leads to lower life and job satisfaction. Nevertheless, the past focus could enhance learning when past situations are used for analysis. Further, the past focus can lead to neuroticism and anxiety due to thoughts about past failures (Shipp et al. 2009; Mohammed & Nadkarni, 2011). Nadkarni & Chen (2014) studied the effect of temporal focus on new product introduction (NPI) under stable or dynamic environmental conditions. They found that CEOs with a past or present focus had more NPIs in stable environments.

2.1.2 Present focus

Literature suggests that present-focused people tend to have a higher risk-taking and opportunity exploitation in the current moment which is relevant for the evaluation of novel ideas (Falchetti, 2022; Shipp et al. 2009). Further, the present focus promises higher well-being due to higher opportunity exploitation in the current moment, but it could also lead to more impulsive behavior and higher risk-taking (Falchetti, 2022). This could also lead to lower well-being. Tan et al. (2019) investigated the effect of temporal focus and self-congruence on the willingness to pay for specific brands. They found that consumers with a present focus tend to perceive brands more favorably in case they reflect themselves to some degree. This process is comparable to idea evaluation or the willingness to invest in an idea. In terms of decision-making, Falchetti (2022) found that subjective time does influence decision-making. More specifically, she found that present focus among audience members leads to a better evaluation of radical ideas due to the reduction of uncertainty. This finding is in line with Shipp et al. (2009) who attribute a higher opportunity exploitation characteristic to present-focused people. Shi and Desjardine (2020) studied the effect of temporal focus on strategic decision-making in the context of mergers and acquisitions. The focus was the behavioral agency model that proposes managers take riskier decisions in terms of current wealth but are risk-averse regarding prospective wealth. He found that present-focused CEOs do hesitate to take excessive risks with current wealth. In contrast, present-focused CEOs are more risk-taking with prospective wealth.

2.1.3 Future focus

The future focus has different implications for the people using it than the present focus as several authors state. Nevertheless, the attributes of future-focused people suggest similar effects on the evaluation of ideas. Referring to Nadkarni and Chen (2014), they found that CEOs high in the present and future focus had more NPIs in dynamic environments. Shi and Desjardine (2020) found differences between present and future-focused CEOs, namely that future-focused CEOs tend to take more excessive risks with current wealth but hesitate to take a risk with prospective wealth. Future focus helps to set goals and increase motivation, which could also result in lower well-being due to higher stress and time pressure (Shipp et al., 2009). Furthermore, a future focus indicates a goal-oriented characteristic high on conscientiousness. Extraversion is related to future focus in that the ambitious characteristic of extraversion leads to thinking about the future in terms of goals and desired rewards. Extraversion is also related to present focus due to engaging in impulsive behavior without paying attention to potential consequences in the future whereas future-focused people are more conscious of future consequences.

Taking monetary risks in the present moment for potential profits in the future leads to the assumption that risk-taking is positively related to present and future focus. However, the urgency to experience current sensations leads to the assumption that the positive relation is stronger for the present focus. Optimism refers to a positive future and the way of thinking that the future will be good or that the individual will find ways to create a good future. Hence, optimistic individuals reasonably have a future focus (Shipp et al. 2009).

2.2 Biases in idea evaluation/crowdfunding

2.2.1 Idea evaluation and cognition

Idea evaluation, next to idea generation, is part of a complex cognitive process. Generally, the aim of idea evaluation is to assess the balance between novelty and practicality. Three characteristics of good ideas are the applicability to a problem, effective solution to a problem, and the ability to implement. Although idea evaluation deals with robust and visible criteria and methods, the cognitive process is essential too. For example, three cognitive processes are linked to the evaluation of ideas, starting with forecasting the potential outcome when seizing an idea. Next, the insights from forecasting are used to contrast the desired performance against expected outcomes. Finally, as early idea descriptions are usually conceptual and not very well defined the evaluation incorporates revising the idea to increase its effectiveness (Puccio and Cabra, 2012).

Cognition is not only essential in the generation of ideas but especially in the assessment of those. McCarthy et al. (2018) established a framework proposing that the filters individuals use in idea evaluation vary across cultures. The assumption is that the creative output of successful ideas is connected to the cognitive filtered assessment. Converging those filters in, for example, an organization, has a direct influence on the innovative output, rather than adjusting processes in idea generation.

2.2.2 Cognitive biases in the evaluation of crowdfunding ideas

Authors in this field recognized the existence of several biases in idea evaluation. Examples are worse evaluations of ideas with similar expertise or less appreciation for external business ideas compared to internal ideas (Schweisfurth et al. 2017). They also found the bias of evaluating hierarchically close ideas higher than more distant ideas within organizations. Relating to this, middle managers tend to favor ideas from their subunits compared to ideas across various subunits of the organization. This finding supports the popular “not invented here” syndrome which describes the same phenomena but at the firm level (Reitzig and Sorenson, 2013). Boudreau et al. (2016) found that research proposal evaluations include biases by the evaluators that can be explained by bounded rationality. Firstly, bounded rationality explains the bias of intellectual distance, which means that evaluators give lower scores to proposals closer to their own expert area due to the recognition of demerits. Secondly, the more novel the research proposal is the worse is the evaluation because the comprehension process could lead to many errors that distort the value of the work.

As already indicated, we want to expand the literature on biases in idea evaluation and suggest that the context of crowdfunding is appropriate for this. As Boudreau et al. (2016) explained in their study the challenge of evaluating ideas became even more challenging due to the developments around the “ideation” concept including the idea platforms that simulate a contest, like crowdfunding. The crowdfunding context is appropriate for studying biases since the common crowdfunding investor uses simple heuristics to evaluate ideas. Using more intuition and judgment leads to a higher chance of cognitive biases influencing the evaluation. The force to use heuristics due to an uncertain situation leads to subjective perceptions of probabilities which leads to cognitive biases (Tversky and Kahneman, 1974). This situation originates from the condition that, although decision-making processes for more traditional financing mechanisms exist, they cannot be transferred to crowdfunding investors. The reasons are the lack of resources and experience necessary to conduct a sound evaluation plus the lack of justification to invest those resources and time into an evaluation of crowdfunding campaigns due to the limited return potential (Shafi et al., 2021; Ahlers et al., 2015). That is why common crowdfunding investors rely on heuristics that provide a simpler and faster decision-making process (Shafi et al., 2021; Moleskis et al., 2018).

There exist examples of biases in the crowdfunding process identified by authors with influences on idea evaluation. One example is crowd bias, which means that investors’ decisions are influenced by other investors or the crowd (Hoegen et al., 2017; Stevenson et al., 2019). Moleskis et al. (2018) indicate the existence of a social proximity bias which tells us that investors are more likely to evaluate ideas from similar people more positively than ideas from more dissimilar people. Additionally, gender bias exists and the literature tells us that women tend to get more positive feedback or evaluations than men due to higher attributed reliability. Next, the home bias could play a role in investor idea evaluation too. This tells us that investors tend to evaluate ideas differently independent of idea quality but influenced by the idea founder’s origin (Guo et al., 2018; Moleskis et al. 2018). The variety of cognitive biases shows that it is hard to evaluate ideas based on pure quality without distortions. Furthermore, it is plausible to assume that more highly influential biases exist that have not been studied yet.

2.3 “Temporal bias” in the context of crowdfunding

The temporal focus has been characterized as an essential cognitive characteristic that influences individual behaviors, decisions, and actions. Literature also called a stable temporal focus a “temporal bias” (Zimbardo and Boyd, 1999; Mohammed & Nadkarni, 2011). Therefore, temporal focus plays a considerable part in creating individual differences. Many business-related decision-making procedures get increasingly integrated into temporal focus studies due to the constructs’ recognized impact on individuals. In the end, it is the individuals who have the power to decide, and the temporal focus they possess is likely to influence decisions to some degree (Nadkarni and Chen, 2014; Rabinovich and Morton, 2012).

Falchetti (2022) found that present focus among an evaluating audience increases the chance to favor radical new ideas. Nevertheless, the target group was audience members, and the focus was on present focus instead of temporal focus in general. That is why she suggested studying the effect of temporal focus in idea descriptions. On a crowdfunding platform, the attractiveness of the idea and thus its description define success. Given the existence of several cognitive biases that influence investors’, and especially crowdfunding investors’, evaluations and decisions, the temporal focus could have a valuable impact in this research domain. A more holistic understanding of the role of temporal focus in idea evaluation could enhance the ratio of successful projects on crowdfunding platforms, simultaneously enhancing the innovative capacity of project founders and project funders. The desire to increase the success ratio is influenced by the increasing growth of the crowdfunding financial mechanism and the yet rather low proportion of successful projects (Hoegen et al. 2017). For example, Kickstarter, a popular crowdfunding platform, and part of this study's research context, has 36% successful projects (Koch and Siering, 2019).

An important note to mention is that we have an idea of how the temporal focus construct influences individuals in decision-making procedures but we do not know how the construct works when incorporated into texts. Nevertheless, we assume that the temporal focus in texts influences individuals’ perception and, thus, affects the attractiveness of the text for the readers or evaluators. Since prior literature recognized the influence of subjective time on the individual’s life the cognitive aspect of the temporal bias, although not studied among the evaluators in this crowdfunding context, is likely to influence the idea evaluation. The following hypotheses are based on the cognitive aspects of temporal focus. Then, these cognitive aspects are transferred into hypothesized effects of temporal focus in idea formulations on idea evaluation.

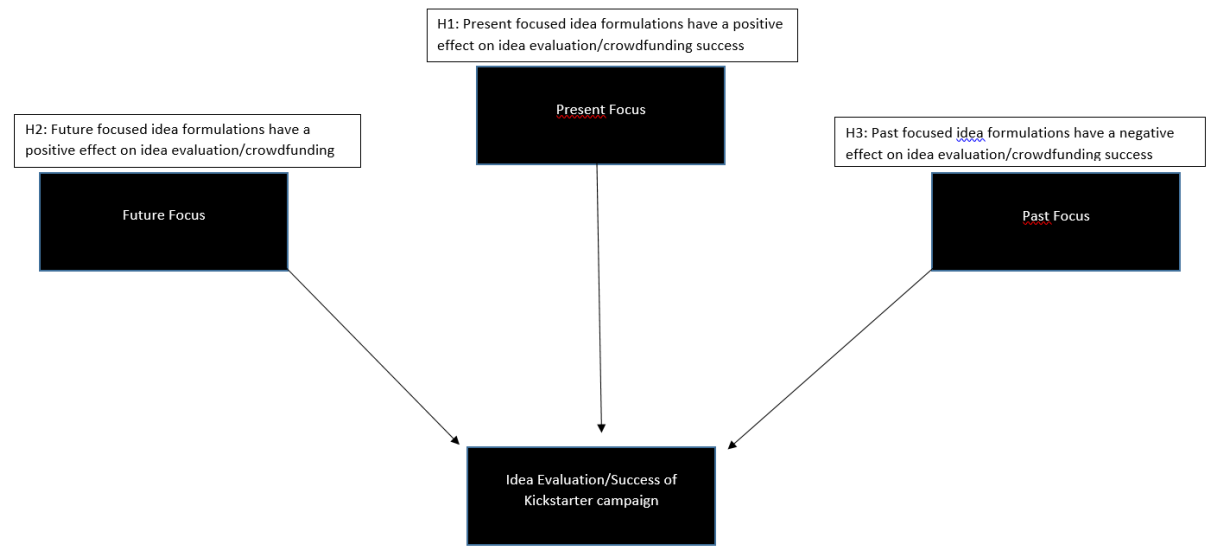
After reviewing and synthesizing relevant literature, the following hypotheses will be subject to investigation throughout this study.

H1: Present-focused idea formulations have a positive effect on idea evaluation/crowdfunding success.

H2: Future-focused idea formulations have a positive effect on idea evaluation/crowdfunding success.

H3: Past-focused idea formulations have a negative effect on idea evaluations/crowdfunding success.

FIGURE 1
Theoretical model



3. Methodology

3.1 Research design

In the following, the methodology is outlined. The research question is “To what extent does temporal focus in idea formulation affect crowdfunding project success?” and guides this paper. This means that we want to analyze the effect of different temporal foci in idea descriptions on funding success.

This study follows the deductive method. A deductive research approach starts with a theory and progresses forward by formulating hypotheses, and collecting and analyzing data. The results of this will show if the hypotheses can be supported or not (Streefkerk, 2019).

A list of explanations for different words or variables used in the analysis in SPSS and the following text can be found in the appendix in table 18. The starting point is the idea or funding success which is the dependent variable. In the crowdfunding context, this is provided by the amount of money pledged or the success or failure of the desired amount to achieve. For a third regression model, the number of backers is the outcome variable defining the success of ideas. A dataset from the platform kaggle.com will be used containing all the relevant information from the idea description to the amount of money pledged (Srinivasan, n.d.).

The independent variable is the temporal focus which consists of three dimensions, namely past, present, and future focus. This study uses the Linguistic Inquiry and Word Count (LIWC) program to analyze the idea formulations from the crowdfunding data. This program possesses dictionaries, each containing several words that reflect the different foci and are consistent with definitions of authors in this field like Bluedorn (2002) and Shipp et al. (2009). Furthermore, these dictionaries have been validated by thousands of speakers and writers (Nadkarni & Chen, 2014).

In this study, we will control the following variables. First, this study controls for the project category of the idea, since individuals are attracted to different kinds of ideas (Koch & Siering, 2019). Second, the country from which the idea originates is controlled too. Other control variables that have been part of the dataset are if the idea was launched on Tuesdays, if the ideas had the deadline on a weekend

and if the idea became boosted from the Kickstarter platform. These were included in the dataset and the assumption was that these variables could have effects on the success of projects too.

The resulting quantitative data will be analyzed in the statistical program SPSS to run regressions and assess if the stated hypotheses are to be accepted or rejected.

3.2 Sample and sampling process

For this study, we use a dataset from kaggle.com (retrieved from <https://www.kaggle.com/code/kerneler/starter-kickstarter-campaigns-dataset-6924d4f5-4/data>). Kaggle is an online platform for data science enthusiasts. Datasets can be accessed by and shared between users for different motivations, amongst other data science challenges. This dataset originally contained over 20,632 Kickstarter campaign ideas drawn from Kickstarter. The timeframe in which those ideas were selected is from 2009 until 2017. In the selection process between different datasets, several aspects were important to consider. There must be a blurb or an idea description to analyse the temporal focus. Just the name of an idea is not sufficient. Furthermore, it is required that the amount of money pledged is included to define the state of the idea, either successful or failed. This implies that, next to the final amount of money pledged on an idea, the goal amount of money for this should be included as well. Finally, the dataset must contain more information to control for the regression output. For example, idea categories, idea origin (country), or the timing of the idea being online on the crowdfunding platform.

The dataset in this study covers all these aspects. The blurb that describes the idea, the amount of money pledged, and the goal amount is included. The outcome of the projects, if they are successful or not, is included in this dataset too. Furthermore, much information is included which as well can be used to control the regression. For example, the country, category, and timing of the ideas. More specifically, if the idea was launched on a Tuesday and if the deadline of the campaign was on a weekend. Next to that, “staff pick” is included. This tells us if the campaign got an exposure boost on the website from Kickstarter staff. The number of backers for any campaign is included too. Furthermore, this dataset seems to be representative of the population of crowdfunding campaigns since campaigns from more than 20 countries are included with more than 20 idea categories. Combined with the high number of campaigns this dataset is appropriate.

Kickstarter operates an “all or nothing” funding model, which means that the campaign either succeeds or fails. In addition, if it fails, is cancelled completely leaving both the creator and the backers at a disadvantage. Thus, the objective of this dataset is to get a better understanding of the Kickstarter crowdfunding mechanism with the motivation to increase the success rate of campaigns in the future (Srinivasan, n.d.).

Before doing the regressions, the Excel file has been adjusted. Mainly, we removed several rows due to a wrong arrangement of data between the cells within these rows. Rows with missing values have been deleted too. Furthermore, campaigns with the state of being live, cancelled, or suspended have been removed due to irrelevance for this study and thus the potential to distort the results. These adjustments took place before the LIWC analysis for the temporal focus of the ideas. After identifying the outliers and the before-mentioned adjustments the final number of cases has been reduced to 16,566. As soon as we implemented the measures for the foci in the Excel file, the file has been exported to SPSS.

3.3 Measures

This study illustrates several models. First, a binary logistic regression with the dichotomous outcome variable state of the idea, either successful or failed, was conducted. The second model is a linear regression with the continuous variable of money pledged as the outcome variable. Moreover, the third model is a negative binomial regression with a dependent count variable which is the number of backers per idea.

To measure the temporal foci of the idea descriptions the Linguistic Inquiry and Word Count (LIWC) tool is used. The two main functions are the processing of text inputs and the dictionaries used for processing these texts. This tool provides several cognitive and emotional categories and is available in over 70 languages. Decades of scientific research, and the identification that the individuals' use of specific language provides insights into their inner state, were the foundation of this software. The main essence of this tool is to calculate the proportion of specific categories present in the text. In other words, the program reads text documents and counts the number of words belonging to one dictionary and compares this number to the total number of words in this document, here the idea description (LIWC, n. d.). An example would be an idea description with ten words. If four words belong to the past dictionary and one belongs to the present focus dictionary, 40% would be the score for past focus and 10% for present focus. In Excel or SPSS, the score is stated as 40.0 or 10.0, respectively. For example, in terms of past focus, words like "was" or "went" would add to the degree of past focus within the text. Therefore, the essential aspects of this program are the dictionaries (see appendix table 3). The dictionaries are bundles of words that make up a specific category. For further information on the tool see the article by Tausczik and Pennebaker (2010).

Several studies already relied on LIWC dictionaries for temporal focus. For example, Nadkarni & Chen (2014) conducted a study to demonstrate strong convergent and discriminant validity and high reliability for the temporal focus dictionaries regarding different kinds of text inputs. Other studies support the appropriateness of these dictionaries. Shi and Desjardine (2020) and Back et al. (2020) relied on the stated usefulness and validity of these dictionaries specifically achieved by the validation study by Nadkarni & Chen (2014). Thus, we assume that these dictionaries are appropriate to conduct our study. Furthermore, compared to older versions the LIWC 2015 version does have improved dictionaries.

3.4 Data analysis (assumptions of the regressions)

Before conducting the regressions, one must check several assumptions. In the following, the relevant assumptions for the different regressions are described and checked accordingly.

Binary logistic regression

For the binary logistic regression, the data should not be paired which means that it should not measure the same thing twice on any idea. This is the case. Furthermore, the outcome must be categorical, more specifically dichotomous. This is the case too. Either the idea will fail or becomes successful.

Outliers

To detect outliers, the following procedure was done in SPSS. Under analyse and linear regression, we put the dichotomous dependent variable (StateCode) in the dependent box and all the independent scale variables in the independent box (past focus, present focus, future focus, blurb_length, goal, and backers_count). Then, the Mahalanobis distance was saved and a new column was created. This new

column was sorted in descending to have the large values at the top. Next, under “transform” a new variable was created called “prob” (probability) with the Cdf.Chisq function. In this new column, the probabilities are listed and any value that is less than .001 is considered an outlier. The first 521 cases, therefore, turned out to be outliers. Those are left out for the rest of the study since the removal appears to have effects on the models’ outcomes.

Multicollinearity

Next, multicollinearity has been checked. Fortunately, SPSS can create collinearity diagnostics including the variance inflation factor (VIF, see appendix table 4). The VIF indicates linear relationships among predictors in the model. A value of 10 is problematic or if the VIF average is substantially above one. Here, all VIF values are just above one, so they seem to be appropriate. Furthermore, the tolerance statistics are the reciprocal values of the VIF and should not be smaller than 0.1. All tolerance values are above 0.9 and are appropriate (Field, 2009). Therefore, multicollinearity is not a problem in this model.

Independence of errors

Another assumption that one must check is the independence of errors. This means that for any observation, the residuals must be uncorrelated or independent and this can be tested via the Durbin-Watson test. Values range between zero and four and a value higher than two means that there is a negative correlation. A value below two means a positive correlation. The final size of the value depends on the model. Generally, values close to two are considered appropriate (Field, 2009). Here, the value is 1.994 (see appendix table 5).

Linearity

In logistic regression, the linearity assumption is met when there is a linear relationship between a scale-independent variable and the dependent variable’s logit. To check this an interaction term between the predictor and the logit is required. If this term is significant, one violates the assumption (Field, 2009). Via the transform and compute variable command, the Ln (natural logarithm) function created the Ln scale variable which was included as the interaction term in the model. The variables “blurb_length”, “goal” and “backers_count” have violated the assumption and therefore been removed from the model.

Multiple linear regression

One assumption for the multiple linear regression is that the predictor variables must be either quantitative or categorical with at least two dimensions. Adding to that, the dependent variable should be continuous and must not be constrained (Field, 2009). This model meets both assumptions.

Multicollinearity

For the multiple linear regression model the, multicollinearity assumption is not violated since the VIF values are all just above one (see appendix table 6). Thus, the tolerance values are acceptable too.

Independence of errors

The independence of errors assumption is not violated too according to the Durbin-Watson test (1.974, see appendix table 7).

Heteroscedasticity

The variance of the residual terms must be constant at each level of the independent variables. This is the homoscedasticity assumption and can be assessed by a plot containing the standardized residuals against the standardized predicted values. If the dots are randomly dispersed, the assumption is met (Field, 2009). Here, there seems to be a pattern in the graph and therefore we assume heteroscedasticity, and the assumption is violated (see appendix figure 2).

Tests for normality

To test for normality in the linear multiple regression we must look at the histogram and normal P-P plot. The distribution appears to be non-normal since the histogram does not show a bell-shaped curve but rather a skewed one (see appendix figure 3). The P-P plot shows a straight line that represents normal distribution (Field, 2009). Since the dots are distant from the line a non-normal distribution is assumed (see appendix figure 4).

Some assumptions in this linear multiple regression are violated. That is why this study includes several models next to linear multiple regression. Still, we use this model to draw conclusions about this sample. Unfortunately, the generalization of these findings beyond this sample of the population is prohibited if one or several assumptions are violated (Field, 2009).

Negative binomial regression

The third model is a negative binomial regression, which is an alternative to the Poisson regression. The negative binomial regression is appropriate for models that include a count variable as the dependent variable. In this case, we use “backers_count” as the dependent variable representing the number of investors that have funded the idea. The number of backers correlates strongly to the success of an idea and the final amount of money pledged and is therefore appropriate as the dependent variable (see table 1). A potential shortcoming of the Poisson regression is the implied assumption of equidispersion. This means that the mean and the variance are assumed to be equal. If the variance turns out to be larger than the mean, overdispersion exists (Coxe et al., 2009). Overdispersion occurs if there is much heterogeneity among the individuals not accounted for by the independent variables. When conducting a Poisson regression the model showed overdispersion and to account for this problem we chose the negative binomial regression. This regression handles the overdispersion problem in that it allows unexplained variability for individuals with the same predicted value (Coxe et al., 2009).

The goodness of fit table (see appendix table 8) shows the ratio of the deviance to the degrees of freedom. The nearer the ratio is toward one the less overdispersion exists. Here the value is 1.260 and provides a large improvement compared to the Poisson regression leading to more accurate parameter estimates.

The omnibus test (see appendix table 9) tells us whether the model, which incorporates the predictors, creates a significant improvement in fit over the only intercept model without any predictors. The test statistic is significant ($p > .01$) and thus the model is improved.

Descriptives and Correlations

TABLE 1
Descriptives and Correlations^a among the Independent and Dependent Variables

	Variable	Mean	s.d.	1	2	3	4	5	6	7	8	9	10	11
1	moneypledged	18965.74	76191.18											
2	backers_count	148.89	472.31	.95**										
3	StateCode	.35	.48	.66**	.68**									
4	past	.69	1.90	-.04**	-.04**	-.01								
5	present	7.25	6.03	-.07**	-.06**	-.06**	.06**							
6	future	.64	1.75	-.11**	-.10**	-.05**	.01	.07**						
7	Boost	.12	.32	.41**	.42**	.34**	-.02**	-.02*	-.06**					
8	LaunchedTuesday	.22	.42	.06**	.06**	.05**	.00	.00	.00	.04**				
9	DeadlineWeekend	.29	.46	-.05**	-.05**	-.04**	.00	.01	.00	-.03**	-.12**			
10	TOP4CountrYN	.90	.30	.05**	.07**	.08**	.03**	.02**	.02*	.03**	-.02*	.00		
11	TopCateg	.64	.48	-.07**	-.07**	-.20**	-.02*	.05**	-.01	-.06**	.01	.01	-.05**	

* p < .05

** p < .01

^aNonparametric (Spearman's rho)

The descriptive and correlations table of the dependent and independent variables shows several characteristics. One can see that there are more failed projects due to the mean of the state variable being nearer to 0 which indicates a failed idea (failed=0; successful=1). The mean number of the amount of money pledged (18965.74) and the number of backers (148.89) are also presented. Further, as already indicated, the amount of money pledged, the number of backers, and the final state of an idea are strongly correlated. The exposure boost correlates quite strongly with the three outcome variables too.

4. Results

In the following, the directions, effect sizes, and significance of the predictor variables of the different models are presented and assessed in terms of the stated hypotheses.

4.1 Logistic regression

In short, a binary logistic regression follows the procedure of linear regression. In contrast to linear regression, the outcome variable in a binary logistic regression is categorical and it has two categories. The predictor variables are categorical and continuous. Due to the outcome variable being categorical, the linearity assumption is violated but can be circumvented by transforming the multiple linear regression equation into logarithmic terms (Field, 2009). In this study, the dichotomous outcome variable is the final state of the idea, which means either successful or failed. The odds ratio, which is the Exp(B) value in the SPSS output, indicates the change in the outcome variable caused by a unit change in the predictor variable (Field, 2009). The categorical variables categories and countries have been indicated to use the last category and the first country as the reference category, respectively. The reference country is the USA and the reference category is “no category”. These campaigns did not indicate a specific category and are useful to compare against the existing categories.

All temporal foci in every model do have a negative effect on the probability of success (see table 2). See appendix table 10 to see all effects of the logistic regression. The Wald statistic is like the t-statistic in linear regression and tells us whether the predictor's contribution is significantly different from zero (Field, 2009). The future focus has the highest negative effect ($p > .01$), followed by past focus ($p < .05$) and then present focus ($p > .01$). Increasing future focus by one unit decreases the

chance of success by 3.2%. For the present focus, the chance is decreased by 1.1%. For past focus, it decreases by 1.3% but the past focus is the only focus that is insignificant.

For the logistic regression H1 and H2 must be rejected since both, present and future focus, do have a negative effect on the success of a crowdfunding idea. H3 must be rejected too due to the results' insignificance. Nevertheless, the direction is coherent with H3.

4.2 Linear regression

As already mentioned, multiple linear regression resembles logistic regression with the difference that a continuous outcome variable is used (Field, 2009). Here, we use the amount of money pledged as the dependent variable representing the success of an idea.

For the next two regressions, the country and category variables are summarised in a dichotomous variable stating that the cases either are in one of the four heavily represented countries or not and refer to one of the most represented categories or not. This makes the regression easier to conduct and provides a better overview.

The t-statistic tells us whether the individual predictors' contribution to the model is significantly different from zero and enables us to estimate outcome values with confidence (Field, 2009).

For the multiple linear regression, the temporal foci do have a negative effect on the outcome variable too (see table 2). In the appendix in table 11, all effects can be seen. Another similarity with the logistic regression is the order of the effect strengths. The future focus has the worst effect ($p > .01$) on the amount of money pledged, with the past focus being on the middle ($p > .05$) and the present focus having the least negative effect ($p > .01$). Practically, increasing the future focus by one unit of the amount of money

TABLE 2
Summary Table of the Effects of the Independent Variables on the Outcome Variables in the Different Regressions

	<i>Logistic Regression</i>	<i>Multiple Linear Regression</i> (Unstandardized Coefficients)	<i>Negative Binomial Regression</i>
<i>Intercept</i>	-.309**	11359.24**	3.993**
<i>Main effects</i>			
past	-.013	-701.88*	-.039**
present	-.011**	-255.48**	-.013**
future	-.033**	-1411.21**	-.092**
<i>Control Variables</i>			
Boost	1.99**	71783.20**	1.744*
LaunchedTuesday	.22**	9110.91**	.349**
DeadlineWeekend	-.13**	-1336.80	-.122**
TOP4CountrYN ^a		-5228.42**	.436**
TopCateg ^b		8594.35**	.391**

* $p < .05$

** $p < .01$

^aCountries are included individually in the logistic regression and not as a dichotomous variable

^bCategories are included individually in the logistic regression and not as a dichotomous variable

pledged decreases by roughly 1411, for past focus a reduction of approximately 702 is predicted by the model. Increasing the present focus by one unit decreases the amount of money pledged by approximately 255. All effects are significant. This leads to the conclusion that H3 has to be accepted

and H1 and H2 must be rejected. Still, the present focus has the least negative effect. What remains surprising is the smaller negative effect of past focus compared to future focus.

The R square value is .101, which means that the predictors in this model account for 10.1% of the variability of the amount of money pledged (Field, 2009).

4.3 Negative binomial regression

In a negative binomial regression, which is an alternative to Poisson regression, the outcome variable is count data. Generally, Poisson regression belongs to generalized linear models that have the benefits of allowing for transformations to the outcome variable establishing linearity to a potential nonlinear relationship between the outcome and predictors (Coxe et al. 2009). Furthermore, the Poisson regression is more flexible in its error structure compared to the assumed normal distribution of ordinary least square regressions (Coxe et al. 2009).

The count data here is the number of backers per idea. As with the other regressions, all foci do have a negative effect on the outcome variable (see table 2). All effects are shown in the appendix in table 12. The order of the strength of the effects is the same too. Increasing future focus by one unit decreases the number of backers by 8.8%, for past focus by 3.8%, and for present focus by 1.3%. The effects, past ($p > .01$), present ($p > .01$), and future focus ($p > .01$), are significant which leads to the conclusion that H3 can be accepted, whereas H1 and H2 must be rejected again. Again, the past focus is beneficial compared to the future focus.

To summarise our findings and the assessment of the hypotheses we can state that the logistic regression model with the state dichotomy as the dependent variable forces us to reject all hypotheses. The linear regression model allows us to accept H3 but with limitations due to the violation of assumptions. The negative binomial regression model makes us able to accept H3 too with the difference that no assumptions are violated.

Additionally, we investigated the amount of money pledged as the dependent variable in the negative binomial regression although the variable does not conform to the count data requirement in the same manner as the number of backers. Numerical problems occurred and SPSS could not conduct the omnibus test. Still, the results show that this is the only model with the present focus having a significant positive impact on the amount of money pledged (see appendix table 12b). Regarding the other results of this study, surprisingly future focus has a better effect on the outcome variable than past focus but with the future focus being non-significant.

4.4 Interaction effects

To investigate potential interaction effects we copied and modified the file into three new files. Every file contains idea descriptions that have at least one dominant temporal focus present. The intention was to study if interaction effects exist. In other words, there is a temporal focus that has a significant effect if it is combined with other foci in the same description.

Firstly, we did the regressions again to see the effects from idea descriptions with all three foci present. Those models did not show different results than the main models described before. Most effects were insignificant too. Furthermore, we created interaction terms with all foci to see if these provide promising results. The interaction terms had similar results and, thus, we assume that there are no interaction effects in this dataset. Consequently, these insights will not be considered in the remaining parts.

4.5 Nonlinear effects

A linear regression means that the predictor variables in the model do have a straight-line relationship with the dependent variable. Due to the violation of several assumptions in the multiple linear regression model and the overall effects so far the assumption that there might be nonlinear effects gets substance. Thus, we investigated the nonlinear effects of the temporal foci.

Firstly, we checked for curve estimation in SPSS. The dependent variable is the amount of money pledged. Due to numerical and statistical circumstances in this dataset, only the quadratic and cubic equations can be considered useful (see appendix tables 13-15). Nevertheless, based on the model summaries the linear equation seems beneficial compared to the quadratic and cubic equations.

We conducted two nonlinear regressions. The cubic regression (see appendix table 16) as well as the quadratic regression (see appendix table 17) did not show very different results than the other regression models presented earlier in this study. The present focus has the least negative effect, followed by the past focus and the future focus has the worst effect on the amount of money pledged. Another finding is that the cubic regression model shows less negative effects of the temporal foci compared to the quadratic model.

4.6 Control Variables

Having a look at the tables in the appendix and focusing on the control variables, we can see that several of them do have a significant effect on project success.

One control variable that is essential for project success is the so-called “Staff Pick” attribute used by the Kickstarter platform. Staff pick means that selected projects are featured on the Kickstarter homepage giving them a boost of exposure. All models in this study show a strong association between selected staff pick projects and project success. Among all variables, the dichotomy of whether projects gain exposure boost has the highest beneficial effect. This finding is supported by Qiu (2013). He also found that projects enjoy an exposure boost for different periods, and some even become repeatedly exposed on the homepage which increases the potential advantage. Staff picks show some sort of above-average quality of the campaign in several categories like innovativeness or idea description. Such a sign helps potential backers to ensure that the campaign has a minimum level of quality and can be seriously considered to potentially reach the funding goal accompanying the rewards for backers. The objectivity of this assessment is ensured too since the platform chooses the campaigns they wish to get an exposure boost (Thies et al. 2019). This finding supports the study by Kaartemo (2017) when viewing the exposure boost as a signal of quality. We analysed our dataset and found that out of the past focused ideas 9.8% have been “staff picked”. For future focus, only 6.5% enjoyed additional exposure, and 11.9% of the present-focused ideas have been chosen. This shows that present-focused idea descriptions have a better chance of being “staff picked”, at least in this dataset.

Regarding the countries in which the ideas have been published, there is no significant finding that shows benefits or disadvantages considering all models in this study. Di Pietro and Buttice (2020) found positive associations between the institutional characteristics of a country, specifically a business-friendly legal environment, less bureaucracy, shorter time, and lower cost for business creation and equity crowdfunding activity. Minority shareholder protection has a positive contribution too. Next to that, individualistic societies tend to be more supportive of financing tools like crowdfunding than collectivistic societies. The countries’ long-term orientation correlates positively to

the crowdfunding market because crowdfunding specifically contains early-stage firms with investors having to wait quite long for a potential return (Di Pietro and Buttice, 2020). Generally, the results in terms of the countries must be assessed with caution due to the significantly higher proportion of ideas from the main four countries compared to the rest of the dataset. Even a small number of successful projects from a minor country could lead to results that are not appropriate to generalize.

In terms of the categories present in this dataset, we can state that ideas belonging to the top categories, which are web, software, hardware, gadgets and ideas belonging to no specific category, have a higher chance of success. In the linear regression model and the negative binomial regression model, both dichotomies show a significant positive effect for the main categories.

The timing of the ideas influences their success too. Specifically, the dataset contains information on whether the idea was launched on a Tuesday or not and whether the deadline for the project was on a weekend or not. All models suggest that a launch on a Tuesday has a positive effect on funding success whereas a deadline on the weekend has a negative effect. Only in the linear regression model, the deadline weekend dichotomy is insignificant but still negative. A launch on Tuesdays is said to be the best date to launch because the traffic on the Kickstarter website is at its peak on Tuesdays. It seems that the best projects are launched on Tuesdays (Stimmel, 2022). Deadlines on weekends do have a negative effect on funding success. A potential reason is the reduced activity on crowdfunding platforms on weekends compared to the working days.

5. Discussion

The concept of subjective time got increased attention in the past. The reason is the increasing recognition that subjective time has a profound influence on people's perceptions of time and therefore meaning to their life (Shipp and Jansen, 2021). Business-related situations are one of several categories in which this statement holds (Nadkarni and Chen, 2014).

Prior research indicates that past-focused people tend to be more negatively influenced by, for example, anxiety by thoughts about past failures (Shipp et al. 2009; Mohammed and Nadkarni, 2011). In contrast, present-focused people have higher opportunity exploitation in the current moment and, thus, higher risk-taking which leads to uncertainty reduction (Falchetti, 2022; Shipp et al. 2009; Shi and Desjardine, 2020). Future-focused people tend to set goals for desired rewards and are generally more optimistic (Shipp et al. 2009; Mohammed and Nadkarni, 2011).

Business-related situations are one of several kinds of situations in which the temporal focus plays a role (Nadkarni and Chen, 2014). Idea evaluation is one business-related activity, especially important for innovation activities. Nevertheless, idea evaluation is sensitive to influences by biases that distort a proper evaluation of the pure quality of an idea. Given the importance of innovation for businesses and the whole economy it is worth studying the potential role of the "temporal bias", synonymous with the temporal focus, in idea evaluation. Especially since the role of temporal focus is increasingly recognized as having an essential role within individuals' decision-making capability. The crowdfunding context is appropriate because investors usually use simpler heuristics for idea evaluation due to their small stake in the project (Ahlers et al., 2015; Shafi, 2021; Hoegen et al. 2017). The use of simple heuristics opens room for more biases compared to more traditional idea evaluation processes. The relevance of the crowdfunding context is supported by numbers that show the currently low success rate of crowdfunding projects (Lukkarinen et al., 2017).

5.1 Summary of findings

In the following, the findings and the assessment of the hypotheses are summarised. The logistic regression model with the state dichotomy as the dependent variable has no accepted hypotheses. The linear regression model allows us to accept H3 but with limitations due to the violation of assumptions. The negative binomial regression model enables us to accept H3 too with the difference that this model does not violate any assumptions.

In this study, all three models are coherent in that temporal focus affects the outcome variables. Nevertheless, all foci contribute negatively to the funding success of an idea. The only exception is the additional investigation with the amount of money pledged as the dependent variable in a negative binomial regression. The present focus has a positive effect but we assess the model with caution due to numerical and statistical problems. Reviewing prior literature, this conclusion is surprising, as future and present focus have been suggested to influence idea evaluation positively. The only non-surprising result of the temporal foci is the negative effect of past focus.

In the logistic regression, the chance of a successful campaign is decreased when using a temporal focus in the idea description. Only the past focus has no significant effect but still a negative direction. Taking the amount of money pledged as the synonym for idea evaluation in the multiple linear regression model, all three foci do decrease the expected amount of money pledged. The more backers are attracted the better the evaluation of the campaigns is the assumption in the negative binomial regression. As with the other models, the expected number of backers is decreased the higher the degree of temporal focus that is used. The overall effect of the different foci is similar in all three models, namely that the present focus has the least negative effect while the future focus has the worst effect. The only non-significant result is the past focus in the logistic regression and future focus in the additional negative binomial regression model.

To conclude the findings, it appears beneficial to prevent using any temporal focus at all. Nevertheless, depending on the complexity of the idea and the required length of the description it might be impossible to avoid using words relating to one of the three temporal foci. Thus, according to this study, it is advisable to use, if any, the present focus in idea descriptions.

5.2 Theoretical contribution

This research contributes to the extant literature in several ways. First, it shows that temporal focus influences the evaluation of ideas when incorporated into the idea description. Although not accepted, our hypotheses confirm prior studies partially. Present-focused ideas have the least negative effect on funding success assuming that funders do prefer ideas with a present focus compared to the other foci. The future focus was hypothesized to have a positive effect too, like the present focus. I still indicated that the present focus is assumed to have a more favourable effect due to the uncertainty reduction of the present focus (Falchetti, 2022). This is the case in this study.

Past-focused ideas have a better chance of being successful than future-focused ideas which is surprising considering prior literature. A reason could be that past focus is considered to deal with learning when including experiences or past failures (Shipp et al. 2009). Although in a business context, Rhaiem and Amara (2021) conducted a literature review about learning from innovation failures and found a positive association between learning from innovation failures and business performance. Matching this finding with our context, we can assume that a past focus enhances visibility for crowd investors about the innovation's potential improvement compared to past solutions. The use of simple heuristics could lead to descriptions like these becoming more successful

because it is easier to see those benefits. Thus, past-focused ideas become preferable compared to future-focused ideas.

The high negative effects for future focus could be the result of crowd investors hesitating to take risks with potential prospective returns. As Shi and Desjardine (2020) found, future-focused managers are more likely to take risks with current wealth compared to future wealth. Since crowdfunding deals with early-stage firms, the potential returns are uncertain and likely to be far in the future. Thus, future-focused crowd investors might be risk-averse in terms of future-focused ideas.

To summarise our first contribution, we can state that temporal focus influences idea evaluation, but the directions formulated in the hypotheses have not been confirmed in this study. Thus, we followed the suggestion by Falchetti (2022) to study the effect of temporal focus in idea description on the evaluation.

Second, this study contributes to the crowdfunding literature by showing that the “temporal bias” exists and is likely to be connected to more textual characteristics. Chan et al. (2020) studied the role of idea complexity in screening evaluations, checked for robustness by constructing a Kickstarter dataset, and found consistent results. They found that entrepreneurs either should focus on easy-to-read or very sophisticated descriptions of their ideas. Since their context also included business plan competitions, I assume that in a crowdfunding context easily readable campaigns are beneficial. This is in line with crowd investors using simple heuristics (Shafi, 2021) which could diminish the interest the more complex the ideas become. In our dataset, ideas without any temporal foci have shorter descriptions than the ideas with a temporal focus. Thus, we can assume that temporal-focused ideas increase in complexity. Therefore, increasing complexity results in all foci having negative effects.

There must be additional aspects of a crowdfunding campaign that determine success. Kaartemo (2017) conducted a systematic literature review and found some success factors for crowdfunding campaigns. For example, communication during the campaign increases funding success. It is not possible to measure the impact of communication in this dataset's campaigns since we do not have information about this. Block et al. (2018) found that updates increase the crowd's willingness to donate and the amount they want to donate. Nevertheless, the crowd rather appreciates the information that reduces uncertainty compared to information that should be published in the beginning. Especially signals of quality increase performance moderated by the reduction of uncertainty for potential backers (Kaartemo, 2017). Examples are the boosted campaigns in this study. On the other side, signals of risk have a negative effect on the funding success of entrepreneurial projects indicating that funders value less risky projects as well as the quality of projects (Moleskis et al. 2018). In contrast, Koch and Siering (2019) found that general information disclosure has a positive effect on funding success. Even information on risk as this reduces uncertainty and information asymmetry.

The language in the descriptions, next to the temporal focus, is essential too. The use of rhetorical formulations attracts more backers (Kaartemo, 2017). Mitra and Gilbert (2014) found categories of phrases that influence the probability of funding. For example, phrases that signal reciprocity increase the probability of funding success. Furthermore, phrases indicating scarcity of the idea, social proof and identity, or liking and authority increase funding success.

5.3 Practical contribution

Practically, this study has implications for idea generators intending to initiate a campaign on a crowdfunding platform. Firstly, it is not advisable to force oneself to include a temporal focus in the descriptions to attract potential backers with a specific focus. This study found that the longer the idea descriptions the higher the degree of a temporal focus. Thus, idea complexity is increased and the

chance of success decreased. The reason for this is the small stake that crowd investors usually have in a crowdfunding campaign resulting in the use of simple heuristics (Ahlers et al., 2015; Shafi, 2021).

Nevertheless, if a temporal focus is included, sometimes it might be unavoidable depending on the nature of the idea and its description, the present focus is the most promising. Campaigns on crowdfunding platforms usually have limited information published about the whole project compared to more formal campaigns, for example innovation projects within a firm. The effect of the present focus is the most beneficial; especially the uncertainty reduction (Falchetti, 2022) attracts potential backers. Therefore, an idea with low complexity and present focus has a good basis for success. Furthermore, the past focus could be effective to use too. Past focus could be beneficial when the idea has a connection to a prior solution to a problem and fills the deficiencies of the prior solution. If this condition is satisfied, a past focus makes it easier for crowd investors that use simple heuristics to see the potential benefits of an idea.

Next, active engagement with potential backers is important during the campaigns. Communication of information about the campaign and signals, especially signals of quality, do increase the chance of success (Kaartemo, 2017). An effective signal of quality in this study is the staff pick which increases the exposure of the idea on the website. Additionally, the external nature of this signal provides objectivity (Thies et al. 2019) and is favourable for crowd funders that are usually in a place of information asymmetry. Furthermore, present-focused ideas do have the highest chance of enjoying the “staff picked” status.

Lastly, it is worthwhile for idea generators to study the characteristics of the respective crowdfunding platform since those can influence the characteristics of campaigns that crowd investors desire. Kickstarter uses an “all or nothing” funding model. The risk-taking characteristic for present-focused individuals (Falchetti, 2022; Shipp et al. 2009) becomes especially applicable in a context like this since both sides, the idea founder and investor are left at a disadvantage in case of failure. Other crowdfunding platforms use different operational procedures and, thus, are likely to influence the campaign’s aspects that increase the chance of success. In other words, to collect as much money as possible.

5.4 Limitations and future research

This study has some limitations. First, the linear regression model has violated some assumptions. Thus, these results must be assessed with caution and are prohibited from generalization beyond this sample. Second, although this dataset is appropriate for this study, one cannot deny the assumption that other datasets could lead to different results. Furthermore, this dataset contains significantly more ideas with a present focus compared to a past and future focus. Next to that, a large proportion of the ideas originates from the United States. This means that the quality of the ideas and behaviour of the idea developer and crowd-funders from the United States significantly influence the results of this dataset. Lastly, this study focused on the role of temporal focus in the idea descriptions. This study ignored the cognitive facets of the crowd investors, namely their temporal focus. Thus, we cannot separate the effect of the textual temporal focus from the effect of the crowd funders’ temporal focus on the evaluation of ideas. This invites for further research, which includes the temporal focus of the crowd funders next to the temporal focus of idea descriptions. Research in a context like this could provide interesting results. Maybe the temporal focus of idea descriptions appears to be irrelevant compared to the cognitive temporal focus of idea evaluators. Another result could be that there are interaction effects. For example, synergies could exist when the temporal focus of idea descriptions matches the temporal focus of the evaluator. This could also mean that a mismatch potentially decreases the chance of a positive evaluation stressing the existence of a “temporal bias”. Furthermore, studying the effect of temporal focus in idea descriptions on idea evaluation becomes more valuable

when done with different datasets. Ideally, more datasets with campaigns from different crowdfunding platforms will be studied in the future. This generates a more holistic understanding of the effect, especially when the operating mechanism differs from the Kickstarter platform. As already stated, the Kickstarter platform operates an all-or-nothing funding model that probably has implications for the success of campaigns.

6. Conclusion

This research investigated the effect of temporal focus in idea descriptions on the evaluation of ideas. Thus, the research question is “To what extent does temporal focus in idea formulation affect crowdfunding project success?”. This research indicates that temporal focus influences the evaluation of ideas when incorporated into the idea description. Nevertheless, the hypotheses mostly have been rejected since the effects’ directions have proven wrong in this sample except for the negative effect of past focus. The present focus has been hypothesized to have the most beneficial aspect, which is true since the present focus has the least negative effect on idea evaluation in all three models. Considering prior literature, it is surprising that past focus has a less negative effect on idea evaluation than future focus. These results could be heavily influenced by the specifics of the used dataset which means that other datasets, or samples, could bring different results. Overall, we hope that this study initiated the first step toward a more holistic understanding of the temporal focus’ effect on idea evaluation and more broadly several business-related activities.

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9. Appendix

9.1 Tables and figures

Table 3
LIWC2015 Output Variable Information

Category	Abbrev	Examples	Words in category	Internal Consistency (Uncorrected α)	Internal Consistency (Corrected α)
Word count	WC	-	-	-	-
Summary Language Variables					
Analytical thinking	Analytic	-	-	-	-
Clout	Clout	-	-	-	-
Authentic	Authentic	-	-	-	-
Emotional tone	Tone	-	-	-	-
Words/sentence	WPS	-	-	-	-
Words > 6 letters	Sixltr	-	-	-	-
Dictionary words	Dic	-	-	-	-
Linguistic Dimensions					
Total function words	funct	it, to, no, very	491	.05	.24
Total pronouns	pronoun	I, them, itself	153	.25	.67
Personal pronouns	ppron	I, them, her	93	.20	.61
1st pers singular	i	I, me, mine	24	.41	.81
1st pers plural	we	we, us, our	12	.43	.82
2nd person	you	you, your, thou	30	.28	.70
3rd pers singular	shehe	she, her, him	17	.49	.85
3rd pers plural	they	they, their, they'd	11	.37	.78
Impersonal pronouns	ipron	it, it's, those	59	.28	.71
Articles	article	a, an, the	3	.05	.23
Prepositions	prep	to, with, above	74	.04	.18
Auxiliary verbs	auxverb	am, will, have	141	.16	.54
Common Adverbs	adverb	very, really	140	.43	.82
Conjunctions	conj	and, but, whereas	43	.14	.50
Negations	negate	no, not, never	62	.29	.71
Other Grammar					
Common verbs	verb	eat, come, carry	1000	.05	.23
Common adjectives	adj	free, happy, long	764	.04	.19
Comparisons	compare	greater, best, after	317	.08	.35
Interrogatives	interrog	how, when, what	48	.18	.57
Numbers	number	second, thousand	36	.45	.83
Quantifiers	quant	few, many, much	77	.23	.64
Psychological Processes					
Affective processes	affect	happy, cried	1393	.18	.57
Positive emotion	posemo	love, nice, sweet	620	.23	.64
Negative emotion	negemo	hurt, ugly, nasty	744	.17	.55
Anxiety	anx	worried, fearful	116	.31	.73
Anger	anger	hate, kill, annoyed	230	.16	.53
Sadness	sad	crying, grief, sad	136	.28	.70
Social processes	social	mate, talk, they	756	.51	.86
Family	family	daughter, dad, aunt	118	.55	.88

Category	Abbrev	Examples	Words in category	Internal Consistency (Uncorrected α)	Internal Consistency (Corrected α)
Friends	friend	buddy, neighbor	95	.20	.60
Female references	female	girl, her, mom	124	.53	.87
Male references	male	boy, his, dad	116	.52	.87
Cognitive processes	cogproc	cause, know, ought	797	.65	.92
Insight	insight	think, know	259	.47	.84
Causation	cause	because, effect	135	.26	.67
Discrepancy	discrep	should, would	83	.34	.76
Tentative	tentat	maybe, perhaps	178	.44	.83
Certainty	certain	always, never	113	.31	.73
Differentiation	differ	hasn't, but, else	81	.38	.78
Perceptual processes	percept	look, heard, feeling	436	.17	.55
See	see	view, saw, seen	126	.46	.84
Hear	hear	listen, hearing	93	.27	.69
Feel	feel	feels, touch	128	.24	.65
Biological processes	bio	eat, blood, pain	748	.29	.71
Body	body	cheek, hands, spit	215	.52	.87
Health	health	clinic, flu, pill	294	.09	.37
Sexual	sexual	horny, love, incest	131	.37	.78
Ingestion	ingest	dish, eat, pizza	184	.67	.92
Drives	drives		1103	.39	.80
Affiliation	affiliation	ally, friend, social	248	.40	.80
Achievement	achieve	win, success, better	213	.41	.81
Power	power	superior, bully	518	.35	.76
Reward	reward	take, prize, benefit	120	.27	.69
Risk	risk	danger, doubt	103	.26	.68
Time orientations	TimeOrient				
Past focus	focuspast	ago, did, talked	341	.23	.64
Present focus	focuspresent	today, is, now	424	.24	.66
Future focus	focusfuture	may, will, soon	97	.26	.68
Relativity	relativ	area, bend, exit	974	.50	.86
Motion	motion	arrive, car, go	325	.36	.77
Space	space	down, in, thin	360	.45	.83
Time	time	end, until, season	310	.39	.79
Personal concerns					
Work	work	job, majors, xerox	444	.69	.93
Leisure	leisure	cook, chat, movie	296	.50	.86
Home	home	kitchen, landlord	100	.46	.83
Money	money	audit, cash, owe	226	.60	.90
Religion	relig	altar, church	174	.64	.91
Death	death	bury, coffin, kill	74	.39	.79
Informal language	informal		380	.46	.84
Swear words	swear	fuck, damn, shit	131	.45	.83
Netspeak	netspeak	btw, lol, thx	209	.42	.82
Assent	assent	agree, OK, yes	36	.10	.39
Nonfluencies	nonflu	er, hm, umm	19	.27	.69
Fillers	filler	I mean, you know	14	.06	.27

Note. Reprinted from “The Development and Psychometric Properties of LIWC2015”, by Pennebaker, J., Boyd, R., Jordan, K., & Blackburn, K. (2015). *The Development and Psychometric Properties of LIWC2015*, pp. 3-4.

TABLE 4
Multicollinearity of the Logistic Regression

Collinearity Statistics		
	Tolerance	VIF
past	.996	1.004
present	.992	1.008
future	.992	1.008
Boost	.975	1.026
LaunchedTuesday	.985	1.015
DeadlineWeekend	.985	1.015
Category	.982	1.019
CountryCodiert	.997	1.003

TABLE 5
Independence of Errors for Logistic Regression

Model Summary
Durbin-Watson
1.994

TABLE 6
Multicollinearity of Linear Regression

Collinearity Statistics		
	Tolerance	VIF
past	.996	1.004
present	.991	1.009
future	.992	1.008
Boost	.989	1.011
LaunchedTuesday	.985	1.016
DeadlineWeekend	.985	1.015
TOP4CountrYN	.995	1.005
TopCateg	.992	1.008

TABLE 7
Independence of Errors for Linear Regression

Model Summary
Durbin-Watson
1.974

FIGURE 2
Heteroscedasticity for Linear Regression

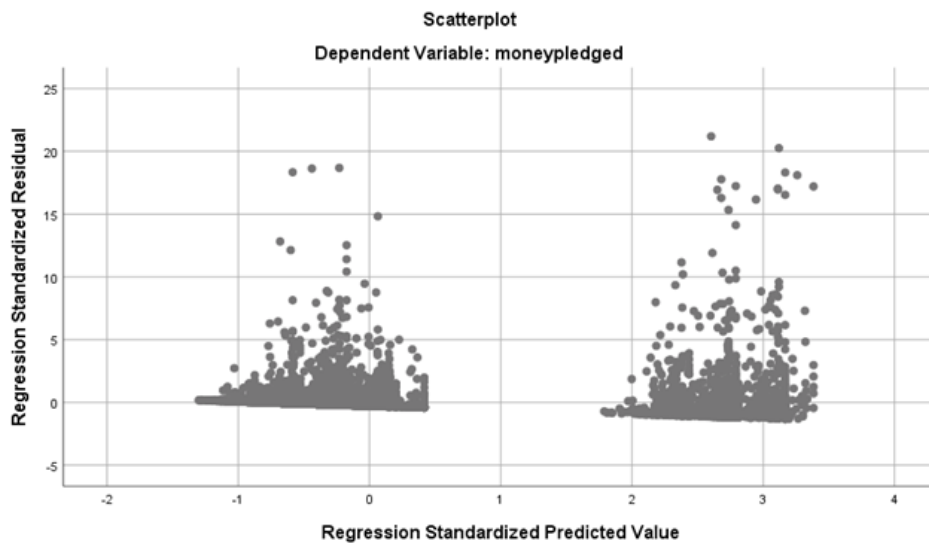


FIGURE 3
Histogram for Normality Test in Linear Regression

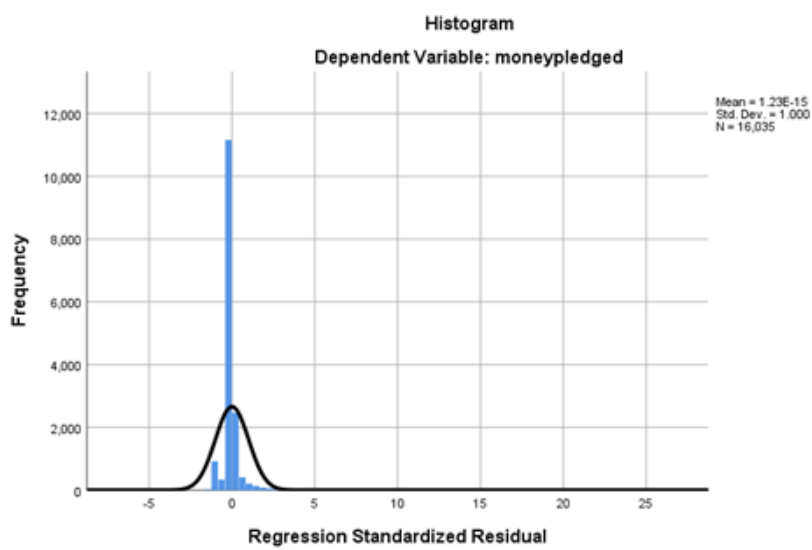


FIGURE 4
P-P Plot for Normality in Linear Regression

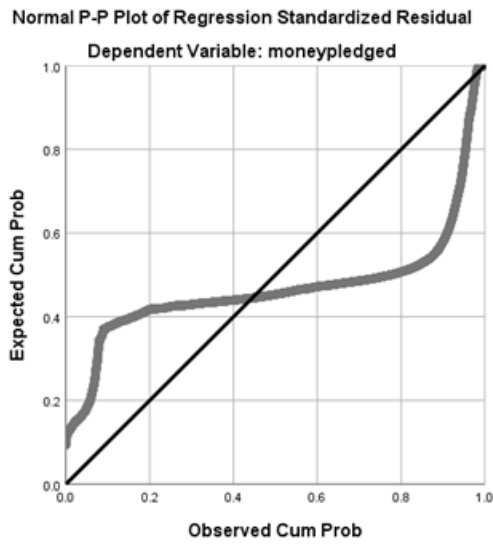


TABLE 8
Goodness of Fit for the Negative Binomial Regression

	Value	df	Value/df
Deviance	20202.457	16032	1.260
Scaled Deviance	20202.457	16032	
Pearson Chi-Square	61001.442	16032	3.805
Scaled Pearson Chi-Square	61001.442	16032	
Log Likelihoodb	-79838.981		
Akaike's Information Criterion (AIC)	159697.962		
Finite Sample Corrected AIC (AICC)	159697.975		
Bayesian Information Criterion (BIC)	159774.791		
Consistent AIC (CAIC)	159784.791		

TABLE 9
Omnibus Test for the Negative Binomial Regression

Likelihood Ratio Chi-Square	df	Sig.
2617.378	8	.000

TABLE 10
Full Model of the Logistic Regression

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
							Lower	Upper
past	-.013	.010	1.698	1	.193	.987	.968	1.007
present	-.011	.003	11.822	1	<.001	.989	.983	.995
future	-.033	.011	8.041	1	.005	.968	.946	.990
Boost	1.995	.063	1004.051	1	<.001	7.352	6.499	8.318
LaunchedTuesday	.223	.046	24.039	1	<.001	1.230	1.144	1.367
DeadlineWeekend	-.133	.042	9.908	1	.002	.875	.805	.951
Category			1441.163	23	<.001			
Category(1)	-20.742	9188.923	.000	1	.998	.000	.000	.
Category(2)	-20.753	4152.741	.000	1	.996	.000	.000	.
Category(3)	-20.749	8960.931	.000	1	.998	.000	.000	.
Category(4)	-20.671	9406.631	.000	1	.998	.000	.000	.
Category(5)	21.663	6592.761	.000	1	.997	2560542894.353	.000	.
Category(6)	-1.942	.093	438.165	1	<.001	.143	.120	.172
Category(7)	-.538	.093	33.568	1	<.001	.584	.487	.701
Category(8)	-.392	.078	25.143	1	<.001	.675	.579	.787
Category(9)	-.315	.071	19.441	1	<.001	.730	.635	.840
Category(10)	.948	.122	60.130	1	<.001	2.579	2.030	3.278
Category(11)	.799	.088	82.157	1	<.001	2.223	1.870	2.642
Category(12)	.611	.100	37.661	1	<.001	1.842	1.516	2.240
Category(13)	-1.244	.167	55.764	1	<.001	.288	.208	.399
Category(14)	.314	.179	3.078	1	.079	1.369	.964	1.946
Category(15)	.363	.156	5.441	1	.020	1.437	1.060	1.950
Category(16)	.610	.144	17.981	1	<.001	1.840	1.388	2.439
Category(17)	-.298	.102	8.605	1	.003	.742	.608	.906
Category(18)	-.107	.124	.739	1	.390	.899	.705	1.146
Category(19)	-1.372	.085	260.689	1	<.001	.254	.215	.300
Category(20)	-.187	.127	2.153	1	.142	.830	.647	1.065
Category(21)	-.272	.189	2.080	1	.149	.762	.526	1.103
Category(22)	20.661	8944.740	.000	1	.998	939353721.7	.000	.
Category(23)	21.288	40192.969	.000	1	1.000	1759397825.2	.000	.
CountryCodiart			94.235	20	<.001			
CountryCodiart(1)	.039	.058	.445	1	.505	1.040	.927	1.166
CountryCodiart(2)	-.320	.091	12.466	1	<.001	.726	.608	.867
CountryCodiart(3)	-.568	.127	19.898	1	<.001	.567	.441	.727
CountryCodiart(4)	-.187	.151	1.540	1	.215	.829	.617	1.115
CountryCodiart(5)	-.419	.165	6.450	1	.011	.658	.476	.909
CountryCodiart(6)	.018	.173	.010	1	.919	1.018	.725	1.430
CountryCodiart(7)	-1.151	.267	18.541	1	<.001	.316	.187	.534
CountryCodiart(8)	-.942	.271	12.091	1	<.001	.390	.229	.663
CountryCodiart(9)	-.625	.294	4.509	1	.034	.535	.301	.953
CountryCodiart(10)	-.111	.276	.161	1	.688	.895	.522	1.536
CountryCodiart(11)	-.918	.371	6.135	1	.013	.399	.193	.826
CountryCodiart(12)	.188	.294	.410	1	.522	1.207	.678	2.150
CountryCodiart(13)	.013	.303	.002	1	.965	1.013	.559	1.836
CountryCodiart(14)	-.876	.415	4.449	1	.035	.416	.185	.940
CountryCodiart(15)	-.671	.410	2.682	1	.102	.511	.229	1.141
CountryCodiart(16)	-.573	.428	1.790	1	.181	.564	.244	1.305
CountryCodiart(17)	-1.346	.578	5.422	1	.020	.260	.084	.808
CountryCodiart(18)	.760	.465	2.672	1	.102	2.138	.860	5.315
CountryCodiart(19)	-.040	.573	.005	1	.945	.961	.313	2.953
CountryCodiart(20)	1.102	1.808	.371	1	.542	3.010	.087	104.187
Constant	-.309	.065	22.598	1	<.001	.734		

TABLE 11
Full Model of the Multiple Linear Regression

	Unstandardized Coefficients		Std. Error	Standardized Coefficients		t	Sig.
	B			Beta			
(Constant)	11359.226		2161.875			5.254	<.001
past	-.701.869		300.435	-.018		-2.336	.019
present	-.255.467		95.012	-.020		-2.689	.007
future	-1411.196		326.838	-.032		-4.318	<.001
Boost	71783.197		1782.695	.303		40.267	.000
LaunchedTuesday	9110.915		1383.643	.050		6.585	<.001
DeadlineWeekend	-1336.798		1263.071	-.008		-1.058	.290
TOP4CountryN	-5228.420		1902.303	-.021		-2.748	.006
TopCateg	8594.353		1191.951	.054		7.210	<.001

TABLE 12
Full Model of the Negative Binomial Regression

Parameter	B	Std. Error	95% Wald Confidence Interval		Hypothesis Test			Exp(B)	95% Wald Confidence Interval for Exp(B)	
			Lower	Upper	Wald Chi-Square	df	Sig.		Lower	Upper
(Intercept)	3.993	.0554	3.884	4.102	5.195.042	1	.000	54.221	48.642	60.440
past	-.039	.0077	-.054	-.024	25.981	1	<.001	.962	.947	.976
present	-.013	.0025	-.018	-.008	28.378	1	<.001	.987	.982	.992
future	-.092	.0084	-.108	-.075	119.567	1	.000	.912	.897	.927
[Boost=1]	1.744	.0460	1.654	1.834	1.438.711	1	.000	5.719	5.226	6.258
[Boost=0]	0a	.	.	.	.	.	.	1	.	.
[LaunchedTuesday=1]	.349	.0359	.279	.419	94.480	1	.000	1.417	1.321	1.521
[LaunchedTuesday=0]	0a	.	.	.	.	.	.	1	.	.
[DeadlineWeekend=1]	-.122	.0328	-.186	-.057	13.764	1	<.001	.886	.831	.944
[DeadlineWeekend=0]	0a	.	.	.	.	.	.	1	.	.
[TOP4CountryN=1]	.436	.0495	.339	.533	77.726	1	.000	1.546	1.404	1.704
[TOP4CountryN=0]	0a	.	.	.	.	.	.	1	.	.
[TopCateg=1,00]	.391	.0308	.331	.452	161.315	1	.000	1.479	1.392	1.571
[TopCateg=.00]	0a	.	.	.	.	.	.	1	.	.
(Scale)	1b	.	.	.	.	.	.	.	.	.
(Negative binomial)	3.493	.0339	3.428	3.560						

TABLE 12b
Full Model of the Negative Binomial Regression

Parameter	B	Std. Error	95% Wald Confidence Interval		Hypothesis Test			Exp(B)	95% Wald Confidence Interval for Exp(B)	
			Lower	Upper	Wald Chi-Square	df	Sig.		Lower	Upper
(Intercept)	17.395	.8961	15.639	19.152	376.830	1	.000	35872162.226	6194180.104	207745335.323
[Boost=1]	-5.008a	.	.	.	.	.	.	.007	.000	.000
[Boost=0]	0b	.	.	.	.	.	.	1	.	.
[LaunchedTuesday=1]	.766	.1632	.446	1.086	22.033	1	<.001	2.151	1.562	2.962
[LaunchedTuesday=0]	0b	.	.	.	.	.	.	1	.	.
[DeadlineWeekend=1]	.575	.1852	.212	.938	9.632	1	.002	1.777	1.236	2.554
[DeadlineWeekend=0]	0b	.	.	.	.	.	.	1	.	.
[TOP4CountryN=1]	-1.695	.4996	-2.674	-.716	11.516	1	<.001	.184	.069	.489
[TOP4CountryN=0]	0b	.	.	.	.	.	.	1	.	.
[TopCateg=1,00]	1.956	.1488	1.664	2.247	172.768	1	.000	7.070	5.281	9.463
[TopCateg=.00]	0b	.	.	.	.	.	.	1	.	.
past	-.181	.0283	-.236	-.125	40.793	1	<.001	.835	.790	.882
present	.086	.0140	.058	.113	37.652	1	<.001	1.090	1.060	1.120
future	-.037	.0650	-.164	.091	.318	1	.573	.964	.849	1.095
(Scale)	1c	.	.	.	.	.	.	.	.	.
(Negative binomial)	2.598	.0102	2.578	2.619						

TABLE 13
Curve Estimation for Future Focus

Equation	Model Summary					Parameter Estimates			
	R Square	F	df1	df2	Sig.	Constant	b1	b2	b3
Linear	.003	45.313	1	16036	<.001	20429.719	-2306.157		
Logarithmic ^a	.	.	.	.	.	.	.	.	.
Inverse ^b	.	.	.	.	.	.	.	.	.
Quadratic	.003	23.167	2	16035	<.001	20488.809	-3407.900	184.080	
Cubic	.003	15.489	3	16034	<.001	20493.954	-5242.990	784.069	-44.978
Compound ^c	.	.	.	.	.	.	.	.	.
Power ^{a,c}	.	.	.	.	.	.	.	.	.
S ^{b,c}	.	.	.	.	.	.	.	.	.
Growth ^c	.	.	.	.	.	.	.	.	.
Exponential ^c	.	.	.	.	.	.	.	.	.
Logistic ^c	.	.	.	.	.	.	.	.	.

The independent variable is future.

- a. The independent variable (future) contains non-positive values. The minimum value is .0. The Logarithmic and Power models cannot be calculated.
- b. The independent variable (future) contains values of zero. The Inverse and S models cannot be calculated.
- c. The dependent variable (moneypledged) contains non-positive values. The minimum value is 0. Log transform cannot be applied. The Compound, Power, S, Growth, Exponential, and Logistic models cannot be calculated for this variable.

TABLE 14
Curve Estimation for Present Focus

Equation	Model Summary					Parameter Estimates			
	R Square	F	df1	df2	Sig.	Constant	b1	b2	b3
Linear	.001	13.675	1	16036	<.001	21638.688	-368.611		
Logarithmic ^a	.	.	.	.	.	.	.	.	.
Inverse ^b	.	.	.	.	.	.	.	.	.
Quadratic	.001	6.901	2	16035	.001	21428.434	-284.408	-4.499	
Cubic	.001	4.657	3	16034	.003	21270.163	-120.388	-25.070	.603
Compound ^c	.	.	.	.	.	.	.	.	.
Power ^{a,c}	.	.	.	.	.	.	.	.	.
S ^{b,c}	.	.	.	.	.	.	.	.	.
Growth ^c	.	.	.	.	.	.	.	.	.
Exponential ^c	.	.	.	.	.	.	.	.	.
Logistic ^c	.	.	.	.	.	.	.	.	.

The independent variable is present.

- a. The independent variable (present) contains non-positive values. The minimum value is .0. The Logarithmic and Power models cannot be calculated.
- b. The independent variable (present) contains values of zero. The Inverse and S models cannot be calculated.
- c. The dependent variable (moneypledged) contains non-positive values. The minimum value is 0. Log transform cannot be applied. The Compound, Power, S, Growth, Exponential, and Logistic models cannot be calculated for this variable.

TABLE 15
Curve Estimation for Past Focus

Equation	Model Summary				Parameter Estimates				
	R. Square	F	df1	df2	Sig.	Constant	b1	b2	b3
Linear	.001	11.598	1	16036	<.001	19710.830	-1075.808		
Logarithmic ^a	.	.	.	.	.	.	.	.	.
Inverse ^b	.	.	.	.	.	.	.	.	.
Quadratic	.001	5.810	2	16035	.003	19700.408	-938.016	-20.712	
Cubic	.001	3.938	3	16034	.008	19707.941	-2538.213	475.336	-34.694
Compound ^c	.	.	.	.	.	.	.	.	.
Power ^{a,c}	.	.	.	.	.	.	.	.	.
S ^{b,c}	.	.	.	.	.	.	.	.	.
Growth ^c	.	.	.	.	.	.	.	.	.
Exponential ^c	.	.	.	.	.	.	.	.	.
Logistic ^c	.	.	.	.	.	.	.	.	.

The independent variable is past.

- a. The independent variable (past) contains non-positive values. The minimum value is .0. The Logarithmic and Power models cannot be calculated.
- b. The independent variable (past) contains values of zero. The Inverse and S models cannot be calculated.
- c. The dependent variable (moneypledged) contains non-positive values. The minimum value is 0. Log transform cannot be applied. The Compound, Power, S, Growth, Exponential, and Logistic models cannot be calculated for this variable.

TABLE 16
Nonlinear (Cubic) Regression

Parameter	Estimate	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
a	9591.016	2083.384	5507.350	13674.681
b (present)	-.397	.205	-.799	.006
c (past)	-10.680	5.084	-20.645	-.714
d (future)	-24.127	7.017	-37.881	-10.373
e (DeadlineWeekend)	-1413.083	1263.608	-3889.895	1063.730
f (Top4Countries)	-5409.830	1902.672	-9139.280	-1680.381
g (TopCategories)	8605.906	1191.812	6269.822	10941.991
h (ExpBoost)	71969.265	1782.912	68474.558	75463.973
i (LaunchedTuesday)	9118.686	1384.367	6405.172	11832.200

TABLE 17
Nonlinear (Quadratic) Regression

Parameter	Estimate	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
a	10325.632	2105.314	6198.980	14452.283
b (present)	-10.938	4.663	-20.079	-1.798
c (past)	-100.658	42.681	-184.319	-16.998
d (future)	-210.807	52.031	-312.793	-108.820
e (DeadlineWeekend)	-1383.432	1263.267	-3859.577	1092.714
f (Top4Countries)	-5323.578	1902.387	-9052.470	-1594.686
g (TopCategories)	8614.175	1191.840	6278.035	10950.315
h (ExpBoost)	71817.425	1783.144	68322.262	75312.588
i (LaunchedTuesday)	9118.000	1383.958	6405.288	11830.712

TABLE 18
Explanation of Words/Variable Names:

past	Past focus
present	Present focus
future	Future focus
StateCode	Final state of the campaign (success/failure)
moneypledged	Amount of money pledged for an idea
backers_count	Number of backers for an idea
Boost/ExpBoost	Exposure boost on the platform (yes or no)
LaunchedTuesday	Campaign launched on a Tuesday (yes or no)
DeadlineWeekend	Deadline of the campaign on the weekend (yes or no)
Category	Used in logistic regression (see below); Musical as reference category
CountryCodiert	Used in logistic regression (see below); USA as reference country
TOP4CountrYN/Top4Countries	USA; Great Britain; Canada; Australia
TopCateg/TopCategories	Web; Hardware; Software; Gadgets; No category
CountryCodiert	All countries with respective codes
CountryCodiert (1)	Great Britain
CountryCodiert (2)	Canada
CountryCodiert (3)	Australia
CountryCodiert (4)	Germany
CountryCodiert (5)	Netherlands
CountryCodiert (6)	France
CountryCodiert (7)	Italy
CountryCodiert (8)	Spain
CountryCodiert (9)	Denmark
CountryCodiert (10)	New Zealand
CountryCodiert (11)	Sweden
CountryCodiert (12)	Switzerland
CountryCodiert (13)	Ireland
CountryCodiert (14)	Norway
CountryCodiert (15)	Austria
CountryCodiert (16)	Mexico
CountryCodiert (17)	Belgium
CountryCodiert (18)	Hong Kong
CountryCodiert (19)	Singapore
CountryCodiert (20)	Luxemburg
Category	All categories with respective codes
Category (1)	Academic
Category (2)	Places
Category (3)	Blues
Category (4)	Restaurants
Category (5)	Webseries
Category (6)	Thrillers
Category (7)	Shorts
Category (8)	Web
Category (9)	Apps
Category (10)	Gadgets
Category (11)	Hardware
Category (12)	Festivals
Category (13)	Plays
Category (14)	Flight
Category (15)	Spaces
Category (16)	Immersive
Category (17)	Comedy
Category (18)	Wearables
Category (19)	Sound
Category (20)	Software
Category (21)	Robots

9.2 SPSS Syntax

Syntax for the Logistic Regression

```
LOGISTIC REGRESSION VARIABLES StateCode
/METHOD=ENTER past present future ExpBoost LaunchedTuesday DeadlineWeekend CategoryCodiert
CountryCodiert
/CONTRAST (CategoryCodiert)=Indicator
/CONTRAST (CountryCodiert)=Indicator(1)
/PRINT=CI(95)
/CRITERIA=PIN(0.05) POUT(0.10) ITERATE(20) CUT(0.5).
```

Syntax for the Linear Regression

```
REGRESSION
/MISSING LISTWISE
/STATISTICS COEFF OUTS R ANOVA
/CRITERIA=PIN(.05) POUT(.10)
/NOORIGIN
/DEPENDENT moneypledged
/METHOD=ENTER past present future ExpBoost LaunchedTuesday DeadlineWeekend USCAGBAU TopCategories
/SCATTERPLOT=(*ZRESID ,*ZPRED).
```

Syntax for the Negative Binomial Regression

```
DATASET ACTIVATE DataSet1.
* Generalized Linear Models.
GENLIN backers_count BY ExpBoost LaunchedTuesday DeadlineWeekend USCAGBAU TopCategories
  (ORDER=DESCENDING) WITH past present future
/MODEL past present future ExpBoost LaunchedTuesday DeadlineWeekend USCAGBAU TopCategories
  INTERCEPT=YES
DISTRIBUTION=NEGBIN(MLE) LINK=LOG
/CRITERIA METHOD=FISHER(1) SCALE=1 COVB=MODEL MAXITERATIONS=100 MAXSTEPHALVING=5
  PCONVERGE=1E-006(Absolute) SINGULAR=1E-012 ANALYSISTYPE=3(WALD) CILEVEL=95 CITYPE=WALD
  LIKELIHOOD=FULL
/MISSING CLASSMISSING=EXCLUDE
/PRINT CPS DESCRIPTIVES MODELINFO FIT SUMMARY SOLUTION (EXPONENTIATED).
```

Syntax for the Nonlinear (quadratic) Regression

```
* NonLinear Regression.
MODEL PROGRAM a=0 b=0 c=0 d=0 e=0 f=0 g=0 h=0 i=0.
COMPUTE PRED_=a + b * present * present + c * past * past + d * future * future + e *
  DeadlineWeekend + f * USCAGBAU + g * TopCategories + h * ExpBoost + i * LaunchedTuesday.
NLR moneypledged
/PRED PRED_
/CRITERIA SCONVERGENCE 1E-8 PCON 1E-8.
```

Syntax for the Nonlinear (cubic) Regression

```
* NonLinear Regression.
MODEL PROGRAM a=0 b=0 c=0 d=0 e=0 f=0 g=0 h=0 i=0.
COMPUTE PRED_=a + b * present * present * present + c * past * past * past + d * future * future
* future + e * DeadlineWeekend + f * USCAGBAU + g * TopCategories + h * ExpBoost + i *
LaunchedTuesday.
NLR moneypledged
/PRED PRED_
/CRITERIA SCONVERGENCE 1E-8 PCON 1E-8.
```

Syntax for the Assumptions for Logistic Regression

```
REGRESSION
/MISSING LISTWISE
/STATISTICS COLLIN TOL
/CRITERIA=PIN(.05) POUT(.10)
/NOORIGIN
/DEPENDENT StateCode
/METHOD=ENTER past present future ExpBoost LaunchedTuesday DeadlineWeekend CategoryCodiert
CountryCodiert
/SCATTERPLOT=(*ZRESID ,*ZPRED)
/RESIDUALS DURBIN.
```

Syntax for the Assumptions for Linear Regression

```
REGRESSION
/MISSING LISTWISE
/STATISTICS COLLIN TOL
/CRITERIA=PIN(.05) POUT(.10)
/NOORIGIN
/DEPENDENT moneypledged
/METHOD=ENTER past present future ExpBoost LaunchedTuesday DeadlineWeekend USCAGBAU TopCategories
/SCATTERPLOT=(*ZRESID ,*ZPRED)
/RESIDUALS DURBIN.
```

Syntax for the Assumptions for Linear Regression

```
REGRESSION
/MISSING LISTWISE
/CRITERIA=PIN(.05) POUT(.10)
/NOORIGIN
/DEPENDENT moneypledged
/METHOD=ENTER past present future ExpBoost LaunchedTuesday DeadlineWeekend USCAGBAU TopCategories
/PARTIALPLOT ALL
/SCATTERPLOT=(*ZRESID ,*ZPRED)
/RESIDUALS HISTOGRAM(ZRESID) NORMPROB(ZRESID).
```

Syntax for the Assumption of Linearity in Logistic Regression

```
LOGISTIC REGRESSION VARIABLES StateCode  
/METHOD=ENTER past present future ExpBoost LaunchedTuesday DeadlineWeekend CountryCodiert  
CategoryCodiert blurb_len backers_count goal LN_goal*goal  
/CONTRAST (ExpBoost)=Indicator(1)  
/CONTRAST (LaunchedTuesday)=Indicator(1)  
/CONTRAST (CountryCodiert)=Indicator(1)  
/CONTRAST (DeadlineWeekend)=Indicator(1)  
/CONTRAST (CategoryCodiert)=Indicator(1)  
/CRITERIA=PIN(.05) POUT(.10) ITERATE(20) CUT(.5).
```

Syntax for the Identification of Outliers

```
REGRESSION  
/MISSING LISTWISE  
/STATISTICS COEFF OUTS R ANOVA  
/CRITERIA=PIN(.05) POUT(.10)  
/NOORIGIN  
/DEPENDENT StateCode  
/METHOD=ENTER past present future goal backers_count blurb_len  
/SAVE MAHAL.
```

```
COMPUTE prob=CDF.CHISQ(MAH_1,7).  
EXECUTE.
```