



HAL
open science

The long-term effects of self pledging in reward crowdfunding

Tobias Regner, Paolo Crosetto

► **To cite this version:**

Tobias Regner, Paolo Crosetto. The long-term effects of self pledging in reward crowdfunding. *Technological Forecasting and Social Change*, 2021, 165 (April), 10.1016/j.techfore.2020.120514 . hal-03106109

HAL Id: hal-03106109

<https://hal.science/hal-03106109v1>

Submitted on 3 Feb 2023

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



Distributed under a Creative Commons Attribution - NonCommercial 4.0 International License

The long-term effects of self pledging in reward crowdfunding

Tobias Regner^{♠*}, Paolo Crosetto[♣]

[♣]GAEL, INRAE, CNRS, Grenoble INP, Univ. Grenoble-Alpes, 38000, Grenoble, France

[♠]University of Jena, Jena, Germany

Abstract

Crowdfunding recently emerged as an alternative funding channel for start-ups, creative artists and social endeavors. While it succeeded in establishing itself as a major player in entrepreneurial finance, its rather informal setup sparked concerns about its resilience to exploitative behavior by project creators. In this paper we explore one form of such opportunistic behavior: self pledging and its potential effect on the post-campaign development of crowdfunded projects. If project creators use own funds to reach the funding target in order to collect the crowd's funds, they end up with less fresh capital than needed, and might hence face problems in delivering on the promises made. Most reward crowdfunding platforms explicitly prohibit self pledges. Startnext, the biggest German platform, allows them. We exploit Startnext data to shed light on effects of self funding on post-campaign performance. We single out 140 substantially self-funded projects, and, by propensity score matching, a corresponding sample of 140 projects that did not receive any self pledges. For each of these projects we collect information about the project development three or more years after their campaigns ended. Projects may have failed to deliver, have run into severe delays, have delivered but then disappeared, or might have given rise to recurring events or led to the founding of a company/organization. Results indicate no structural long-term impact of substantial self funding.

JEL classifications: L26, D03, G32

Keywords: crowdfunding; entrepreneurial finance; self funding; survival; long-term viability

*Corresponding author (tobias.regner@uni-jena.de). Both authors contributed equally to this research project, the order of the authors was randomized.

We would like to thank Francesca Tenca and the participants of the EU-SPRI conference on The changing entrepreneurial finance landscape: challenges for policy at Politecnico di Torino (24th September 2019, Torino) for their thoughtful comments and suggestions. We are grateful to Startnext, especially Anna Theil, for providing the data and helpful discussions. Javier Changoluisa and Marlene Scherer provided excellent research assistance. Tobias Regner gratefully acknowledges support by Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) - project number 628902.

1 Introduction

Crowdfunding has become a major player in the domain of entrepreneurial finance. It provides a new funding channel for aspiring start-ups, creative artists or social endeavors. However, along its ascent concerns about the potential exploitation of the crowd have been voiced: funders may not be protected well enough from opportunistic behavior of project creators [Shiller, 2015]. Reward crowdfunding sometimes suffers from outright fraud as projects do not intend to deliver after a successfully funded campaign [Cumming et al., 2020]. While fraudulent behavior is clearly bad for pledgers and the sustainability of the crowdfunding model, not all opportunism is equally bad. It can range from severe to light or non-existent adverse effects. On the light end of the spectrum lies self-funding, whereby project creators interfere with the funding mechanism by pledging themselves. While self-funding is not necessarily bad, it is opportunistic and it does change the results of campaigns behind the back of normal pledgers. Commonly, platforms like Kickstarter or Indiegogo prohibit project creators to directly pledge to their own projects and they sanction indirect self funding attempts. However, it appears easy to circumvent this via friends [KickstarterForum, 2014, Dresner, 2014]. Thus, self funding is most likely not prevented and probably takes place in the dark. Concerns about self funding partially stem from a practical perspective: self funding reduces the amount of capital made available through a campaign and hence can lead to viability issues when the project needs to deliver what it promised. Moreover, self-funding can raise moral concerns: it compromises the trust and special relationship between project creator and the crowd, an important ingredient of crowdfunding success.

In this paper we shed light on the impact that self funding can have on the long-term viability of crowdfunded projects. We do so by exploiting natural variability in self funding bans by using data from Startnext, the biggest German crowdfunding platform, where self pledges are allowed. Crosetto and Regner [2018] quantify self funding at Startnext and underline their strategic role. While self pledges account for only 1.6% of all pledges, they are important for projects' dynamics and positively correlated with the chances of funding success. Project creators make about 10% of all initial pledges to a campaign and 9% of all pledges that secure funding. About 6% of all projects are self funded by more than a quarter of their funding target. This suggests that project creators try to use self pledges strategically in order to boost their campaigns' success chances.¹

What are the potential consequences of substantial self funding on the post-campaign performance of a project? If self-funded, projects raise less capital than they stated they would require. Assuming that project creators accurately and truthfully set the target amounts for their projects, self pledges reduce the fresh resources available to the project. As a result, chances increase that projects fall into delays, fail to deliver what they promised or are forced to reduce the quality of the goods delivered.

But it is also possible that project creators are farsighted, *anticipating* they could use self-pledging if need be, and hence declare higher funding targets than what they actually need. While in a world without self pledges increasing the target decreases the likelihood of reaching the threshold, when self-pledges are possible increasing the target is a safe bet: if enough backers flock to the project, there will

¹Their success appears limited to direct attempts as Crosetto and Regner [2018] do not find evidence that self pledges trigger subsequent herding behavior, be it at the campaign's start or later in the funding process.

be more capital; if not, the project creator can self-pledge the difference between the money actually raised and the funding target, and secure success.

Our study analyzes self-funding's long-term impact on the development of a project *after* its successful funding, taking into account that self-funded projects may not necessarily have less cash than required, if farsighted project creators anticipated their own potential use of self pledging. Regarding the campaign itself, we test whether self funders are farsighted: if this were true, self-funded projects would be more likely to have higher funding targets, *ceteris paribus*. With respect to what happens after the campaign, we hypothesize that a successful post-campaign project development is negatively correlated to the extent of self funding.

If self funding indeed turns out to be linked to worse post-campaign performance, project creators' self funding distorts the crowdfunding allocation mechanism, resulting in an inefficient outcome as inferior projects get funded. Consequently, the practice of self funding might undermine the positive contribution of reward crowdfunding to the domain of entrepreneurial finance. It is therefore a critical challenge to improve our understanding about self-funding and its repercussions.

Our dataset builds on the data used in [Crosetto and Regner \[2018\]](#). For the purpose of our analysis, we restrict attention to successfully funded projects, and within those we focus on projects that exhibit substantial self funding: projects that are self funded by more than 37% of the target amount, and projects whose *pivotal* pledge – the pledge that clears the threshold – was a self pledge. This amounts to 140 projects. Via propensity score matching we find the most comparable control group within the subset of non self-funded successful projects. For this sample of 280 projects we manually collected information about complaints (about delays, quality issues, failed project delivery) from the Startnext platform, about the development of the project after the campaign and about the creators' further projects at Startnext.

In our analysis we first attempt to distinguish two potential types of self funding project creators. Farsighted ones increase their funding target in anticipation of being able to self pledge in case the crowd's funding falls short, while myopic ones do not adjust their target at the outset of the campaign and self pledge when they realize reaching the target is in danger. We find no evidence of farsightedness: our analysis does not indicate higher funding targets among projects with self funding. Consequently, self funders appear to be acting impulsively rather than following through on a plan, increasing the likelihood that self funding is associated with post-campaign problems.

In the second step of our analysis, we compare substantially self funded projects to their counterparts in the following dimensions: complaints, future development and further projects of the creator. Results do not reveal any structural differences between substantially self funded projects and our control group, neither with respect to complaints about the project's delivery itself nor in terms of the long-term development of the successfully funded projects. Also the frequency of further projects at Startnext and their success does not indicate an impact of self funding.

Our study is one of the first to address a concern that accompanies the emergence of crowdfunding: are crowdfunders protected well enough from potentially opportunistic behavior by project creators? We focus on self funding, a subtle manipulation of the crowdfunding mechanism, and track its conse-

quences for the life of projects after their successful campaign. Our results do not lend support to the conjecture that creators who employ self funding as a means to reach the funding target perform worse in terms of future development of their project. Our data even suggest that self-funded projects have a higher chance to develop into established companies/organizations than projects that were not self funded.

This result might be due to a host of reasons. Self pledges are allowed at Startnext as a way for projects creators to add to a project resources collected offline. Even if the characteristics and dynamics of self pledges seem to suggest otherwise, it might as well be that self pledges are used by the book. Moreover, an entrepreneur who is truly dedicated to the planned project might use self pledging to secure funding and then fully commit to successfully completing his cause. Self pledges could also be the result of a benevolent project creator who is convinced of the (high) quality of her project (more than pledgers are aware), and secures funding to enhance the welfare of backers. We do not have enough data to test these alternative hypotheses.

Nonetheless, the transparent nature of self pledges at Startnext allows us to shed light on a practice that is prohibited on most platforms and hence hidden to researchers and the platform alike. Most importantly, platforms ban self pledges partially to avoid underfunding and subsequent delivery problems. While this is an understandable and valid concern, our analysis shows that it is not empirically warranted.

2 Related literature

By now, a number of studies look at the long-term development of successfully crowdfunded projects. [Mollick \[2018\]](#) reports results from a survey of Kickstarter projects from the design, technology, and video games categories with targets over \$5,000 and funding completed between 2009 and July 2012. Over 90% of successfully funded projects remained ongoing ventures one year after funding and 32% generated yearly revenues of over \$100,000 a year. [Mollick \[2018\]](#) also conducts a survey among Kickstarter backers and asks about the delivery of rewards that the project promised. Based on the responses of 47,188 backers he estimates the overall failure rate (as in rewards not delivered as promised) at Kickstarter to be around 9%, with higher failure rates if the funding target is less than \$1,000 or more than \$250,000. [Stanko and Henard \[2017\]](#) combine quantitative Kickstarter campaign data with survey responses. They report that subsequent market performance of the crowdfunded product is positively correlated with the number of backers. [Roma et al. \[2017\]](#) find that for successfully funded technology projects at Kickstarter a higher pledged amount in the campaign is positively correlated with getting follow-up funding (conditional on the presence of patents or a large social network). [Ryu and Kim \[2017\]](#) contrast data on Kickstarter-funded projects from the technology category and comparable angel-funded start-ups. They find that crowdfunded start-ups are less likely to receive subsequent financing from venture capitalists.

Several studies analyze the reasons behind delivery delays during the fulfillment phase. [Schiavone \[2017\]](#) reports that creators' incompetence and managerial problems lead to late delivery of rewards.

Appio et al. [2020] employ text mining techniques in a study of Kickstarter technology projects. They find that perceived incompetence, fraud, and funding cancellation are correlated with delays in rewards delivery.

Opportunistic behavior when crowdfunding rewards are due emerged as a research topic only recently. Cumming et al. [2020] analyze Kickstarter and Indiegogo projects and document the extent of fraud and its empirical determinants.² They conduct a search of media reports between 2010 and 2015 across nine countries in order identify fraud cases. Their results indicate that a Facebook presence lowers the likelihood of fraud by over 50%, that fraudulent project creators tend to have fewer previous crowdfunding activities and that they tend to provide poorly worded campaign descriptions.³ Also Lin and Pursiainen [2017] address moral hazard in reward crowdfunding. They find a positive correlation between social capital and projects' funding success before Kickstarter introduced a rule change that made fraud more costly, while project success is generally higher after the rule got implemented. They explain these findings with the existence of opportunistic behavior among project creators and a mitigation of moral hazard (via social capital) resulting in a positive effect on success chances.

Besides outright fraud once the campaign is funded and delivery is due, project creators may also interfere with the funding mechanism during the campaign phase: they could pledge themselves. Crosetto and Regner [2018] study data from Startnext, the biggest German crowdfunding platform.⁴ In contrast to other portals, Startnext does not ban self pledges which enables an analysis of self funding's extent and its role during the funding campaign. Crosetto and Regner [2018] find that some project creators employ self pledges strategically, in specific situations. One project in ten is started by a self pledge, to get a sluggish campaign off the ground. Project creators make 9% of all pledges that push funding past the target, thus securing funding for projects that might not have succeeded without them. The lag between the last pledge and a self pledge is longer than for normal pledges, indicating that self pledges are used to show signs of life in a project that went temporarily quiet. Self pledges are also bigger than normal pledges, and their size is significantly more often about 1% of the funding target – so that its impact would show up on the summary page of the project that shows progress as an integer percentage. The results of Crosetto and Regner [2018] indicate that, while not all self pledges are used strategically, project creators use initial self pledges to attract attention, large self pledges during a lull in external pledging to try and initiate a cascade of pledges from the crowd, and in nearly one in ten projects they use own funds to reach the funding threshold.

However, there is mixed evidence about the impact of a strategic use of self pledges on success rates. Projects having been started by a self pledge are *less* likely to succeed than projects not self-started. Self pledges are often made with the aim of starting a cascade, but there is no evidence that this strategy works – self-funded projects are not more likely to trigger subsequent herding behavior. Only *pivotal* self pledges have an obvious immediate impact on project success.

²See Hainz [2018] for an overview of fraudulent behavior in crowdfunding.

³Siering et al. [2016] propose a deception detection support mechanism to identify fraudulent behavior based on content-based and linguistic cues.

⁴Also Eiteneyer et al. [2019] use data from Startnext projects. Their survey focuses on the role of consumer involvement and study to what extent engaging crowdfunders enhances product innovation and financial success. They do not analyze projects' post-funding development and its potential determinants.

3 Theoretical framework and hypotheses

Entrepreneurial finance's pecking order hypothesis posits that firms have a preference to use internal capital to obtain the funding they require for their investments instead of going to external financiers [Myers and Majluf, 1984]. Yet firms, especially startups, often do not have sufficient cash flow to finance their new projects internally. Thus turning to external financing sources is essential for entrepreneurs, however it is well known that they face difficulties to secure funding from traditional external finance options like banks or venture capital providers [Cosh et al., 2009].

Generally, access to external capital is regarded to be an essential catalyst of economic growth. Rajan and Zingales [1998] establish a causal relationship between the development of the financial sector and the growth of industries that rely on external finance. Amore et al. [2013] provide evidence that credit supply plays a key role for firms' innovative performance.

Project creators at crowdfunding platforms are arguably cash constrained by definition, since otherwise they would finance their project by their own means.⁵ If they fall short of their project's funding target and cover the gap themselves (in order to secure the crowd's funding), they are essentially still left cash constrained, at least partly. Given proper budgeting their available funding is not sufficient to run the project as planned. Building on the above mentioned importance of access to external capital it seems likely that unresolved cash constraints have, on average, negative implications on future prospects of the project.

Most crowdfunding platforms adopted an outright ban of self funding. Kickstarter states the following on its trust & safety web page: *"Don't try to game the system or make your project look more popular than it is — creators who try things like self-funding and other pledging schemes are at risk of having their projects suspended."*

Kickstarter itself does not disclose *why* self-funding is prosecuted. But according to posts in Kickstarter's forum [KickstarterForum, 2014], the platform fears that self pledges can be opportunistically used to reach the threshold, hence producing partially cash-constrained projects, besides constituting unethical behavior: *"(...) Kickstarter operates under the premise that you need the whole amount for the project to work. When people pledge to your campaign, they aren't just buying something, they're also pledging because they believe that without the support, the project will not reach its goal and will not receive any funds."*

While the ban on self funding is widespread, it is not universal. Startnext, the biggest German crowdfunding platform, allows self funding. Startnext allows self funding as a way to channel onto the website money raised in offline contexts, such as friends & family, offline fundraisers or special events. Besides, Startnext reckons that a self-funding ban would be easily circumvented. There are no formal limits on self-funding at Startnext.

In the following, we develop an economic framework of self funding, in order to derive testable hypotheses for the long-term viability of crowdfunded projects.⁶ As all entrepreneurial finance, crowd-

⁵Besides the direct benefit of potentially getting funding it must be acknowledged that crowdfunding brings along further indirect advantages. Getting the crowd involved during the campaign can result in benefits for the innovation process (valuable product feedback) and the diffusion of the product via word of mouth [Stanko and Henard, 2017, Mollick, 2016]. Furthermore, [Brem et al., 2017] show that crowdfunding is an enabler of user innovation.

⁶See Strausz [2017], Chemla and Tinn [2019], Ellman and Hurkens [2019] for economic models of reward crowdfunding.

funding is built around a fundamental information asymmetry: the project creator knows more about the project than her potential backers. In this particular context, self pledges can subtly be used to alter the perception of success of a project, or simply to push an unworthy project to success. We will focus here on one particular aspect of self funding: its impact on the problem faced by a project creator at the beginning of a campaign, i.e. setting its funding target.

We suppose that a project creator knows with certainty the amount of resources needed for her project to succeed. She also knows that the crowd is characterized by a distribution of willingness to pledge, but does not know exactly how much the crowd is willing to fund one particular project. Based on this information, she has to set the optimal funding target for her project. Under crowdfunding's threshold model, this target serves as a threshold: the campaign is successful and she gets the money to proceed with the project if and only if the threshold is met within the pre-determined project duration. We will suppose the project duration to be fixed and exogenous.

In this setting, the project creator has to trade off the potential benefit of increasing the target – i.e., securing more funds upon success – to its potential cost – i.e., the rise in the risk of not meeting the threshold. The problem is symmetric: decreasing the target increases the likelihood the project secures funding, but reduces the capital raised upon success. While the exact threshold set might depend on the project creator's risk attitudes and beliefs about the distribution of potential willingness to pledge for her project, it is clear that she faces a trade-off between the external capital she can raise and the risk that the campaign might fail.

The option of self pledging substantially changes this problem. Increasing the target beyond the known cost of the project has a potential benefit – more fresh capital raised – but does not result in a higher risk of not meeting the threshold. The project creator can cover the difference between the amount raised on the platform and the target with a last-minute *pivotal* self pledge just at the cost of borrowing the needed capital for a very short term – the time to pass the threshold and secure all funding; once funding is secured, the loan can be promptly reimbursed. If we assume the project creator to be credit-constrained, this strategy is limited by the amount of cash available and its cost becomes the opportunity cost of using this money for a very limited time span.

With such a model in mind, we can identify two types of self-pledgers: *farsighted* self-funders adjust their target upwards anticipating that they could close the gap if need be, and *myopic* self funders who do not adjust their target, but still use self pledges strategically.

The implications of self funding for the post-campaign performance of a project are different for these two distinct types. Farsighted self pledgers' behavior might be regarded as unethical, but should not in principle impact the quality of the project. If pledges reach the threshold without the need to self pledge, their strategy leads to more capital than is actually needed; if instead pledges fall short of the threshold, they have to use self pledges, but on average they have correctly anticipated this and hence still collect the required amount to cover the cost of actually delivering on the promised project. On the other hand, myopic self pledgers will in general end up with *less* external capital than they need for their projects. This capital shortage can result in the post-campaign problems and delays that have been documented in the literature and against which crowdfunding is not (yet) well defended.

The aim of this paper is to investigate the impact of self funding on the long-run viability of crowd-funded projects. According to the theoretical considerations outlined above, self pledges are a problem for the long-term prospects of projects, because they reduce the amount of cash available to run the project. However, this is true only for myopic and not for farsighted self pledgers.

In order to best address the impact of self pledges on the long-run performance of projects, we hence structure our analysis in two steps: first, we test for the presence of farsighted self pledging; second, we estimate an upper bound of the potential long run problems generated by self funding.

Hypothesis 1 *If project creators are farsighted, self-funded projects will tend to have higher funding targets.*

If at least part of the self pledges occur myopically, i.e., project creators do not increase their funding targets by their self funding capacity, then projects will be cash constrained even after a successful funding campaign and consequences on the ability to deliver the project as promised are to be expected.

Hypothesis 2 *If at least part of the self pledges occur myopically, self funded projects will raise less money than needed given their goals. They will hence be more likely to result in post-campaign negative consequences for their backers.*

4 Data

Our dataset builds on the data used in [Crosetto and Regner \[2018\]](#), which consist of a fully anonymized database dump from Startnext, the biggest German reward crowdfunding platform. It contains all transactions on the platform from the date of its launch (October 2010) to February 2014. The dataset consists of 2,254 projects, 1,139 of which were successfully funded.

Overall, 693 project creators self pledged for, on average, 12.3% of their funding target. Out of them, 458 projects got successfully funded. [Table 1](#) provides descriptive statistics. The post-campaign development of projects, the topic of this study, can only be evaluated for projects that reached the funding target. This is why our following analysis focuses on the 1,139 successfully funded projects.

Table 1: Funding outcome (failure/success) and self funding (yes/no) by project in the sample

	Failure	Success	Total	% Success
Self funded	235	458	693	66.1%
Not self funded	880	681	1,561	43.6%
Total	1,115	1,139	2,254	50.5%

[Figure 1](#) illustrates the extent of self funding among the 458 successfully funded projects with self pledges. Nearly half of them self funded less than 10% of their funding target and around two thirds funded less than 20%. Self funding of more than half of the target is relatively rare (6%).

[Crosetto and Regner \[2018\]](#) identify four types of self pledges, depending on the time when they occur. *Starting* self pledges are the first pledge to a project. *Pivotal* self pledges are the ones allowing a project to clear the funding target and secure funding. *Extra-time* self pledges happen *after* the threshold

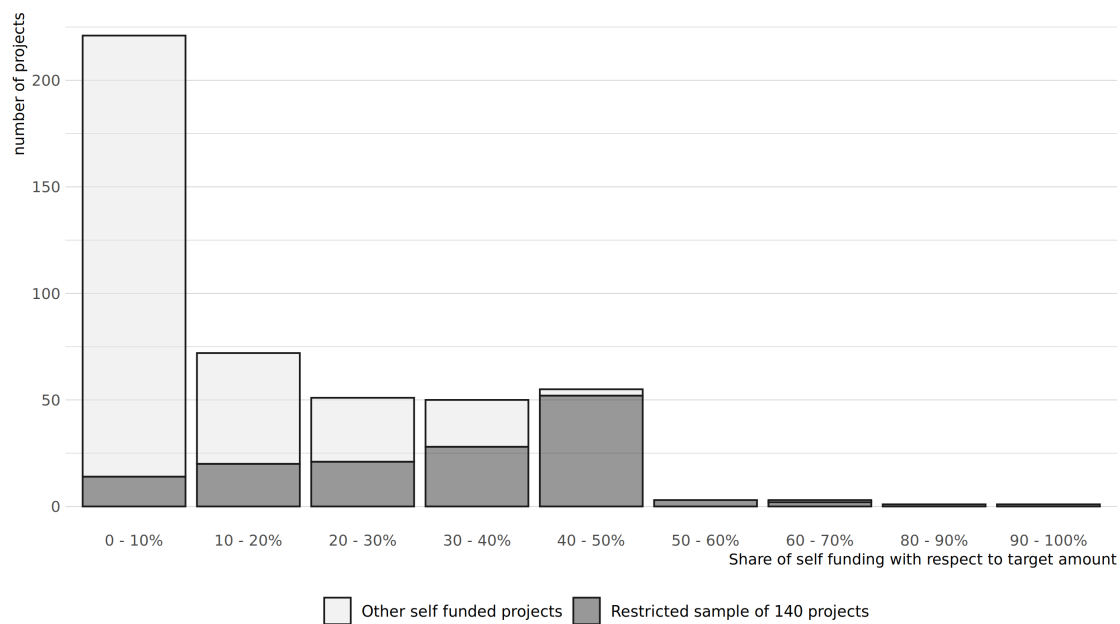


Figure 1: Distribution of the ratio of self funding to funding target, all projects and restricted sample

is met. Finally, *In-between* self pledges happen at any point during the campaign, possibly to re-create interest in the project after some inactivity.

Figure 2 shows the main stylized facts for the self pledges of all successful projects at Startnext. The upper panel shows self pledges along two dimensions: their timing relative to the project duration, and the amount of resources the project reached as a fraction of the funding target thanks to that self pledge. Colors indicate the self pledge type. The lower panel shows a histogram of self pledges across the project duration. While the vast majority of self pledges is of the *in-between* type, starting and pivotal pledges take the front role during the spikes that happen at the beginning and end of a campaign.

In this paper we focus on the long-term effect of self pledges. Self funding represents a problem for the viability of projects after a successful campaign only if they result in funding shortages once the project reaches the production and delivery phase. In this sense, different types of self pledges can have a different impact in the long term. *Extra-time* self pledges should not play a relevant role, as they clearly are *additional* resources with respect to the funding threshold. *Starting* pledges should also have little effect, conditional on project success: they are mainly used to get the ball rolling for a project with a slow start, and their effect should have been washed away by the end of the funding phase. The categories most likely to impact the long-term viability of projects are *pivotal* self pledges, and *in-between* self pledges given their cumulative amount reaches a critical threshold. Pivotal self pledges might signal situations in which the projects would *not* have reached the threshold absent self funding. As such, they might signal a post-campaign scarcity in funds that might result in problems. *In-between* self pledges are not a problem *per se*, but they become one if the project is largely self funded. The larger the amount of self funding, the smaller the fresh resources raised by the campaign.

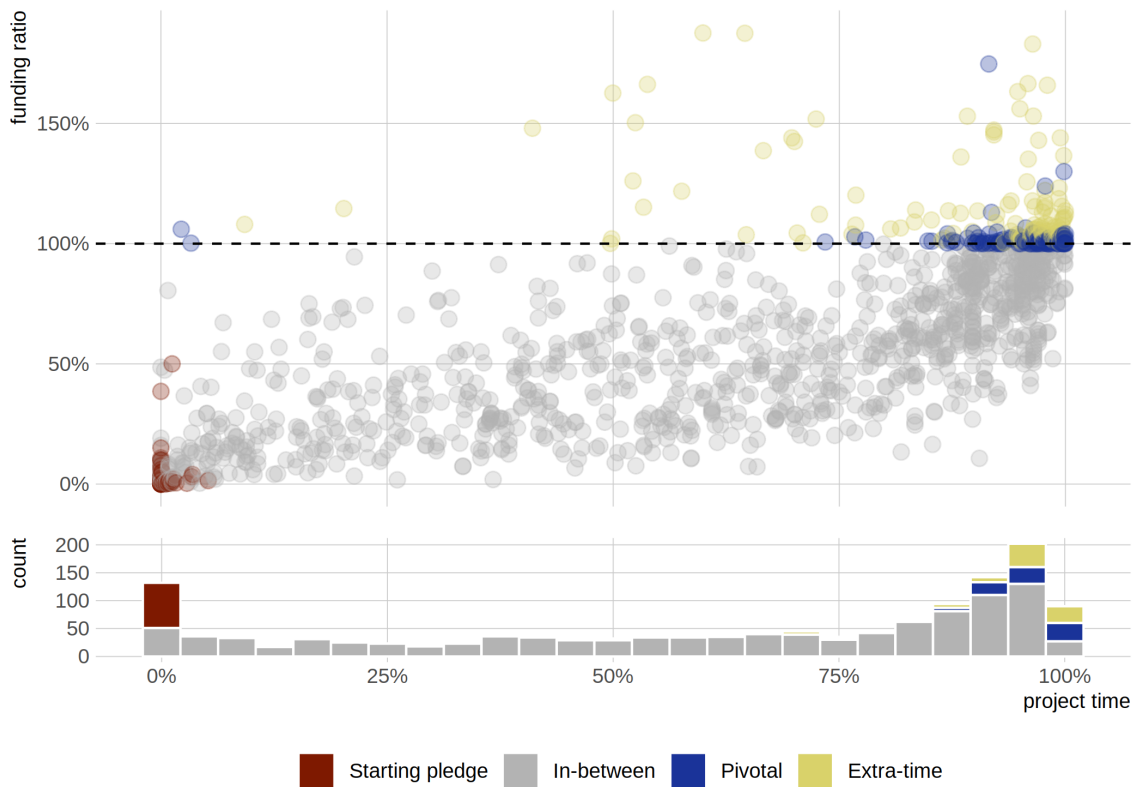


Figure 2: Self pledges for successful projects at Startnext. Distribution in time and project funding (top) and density of self pledges in time (bottom).

In order to test our hypotheses and shed light on the extent of strategic self pledging and its potential effect on after-funding performance, we will focus on two separate samples.

For Hypothesis 1 we will use the full sample of all 1,139 successful projects. Given the above discussion of the different types of self pledges, we will also report results on qualified subsets of the successful projects.

For Hypothesis 2, we focus on those projects that are most likely, according to the discussion carried out above, to run into post-campaign issues. We hence select all successfully funded projects that were self funded by more than 40%, resulting in 69 projects, and the 99 successfully funded projects whose pivotal pledge was a self pledge. Since among the 99 projects with a pivotal self pledge 28 are self funded by more than 40%, the resulting sample consists of 140 projects.⁷ The distribution of the share of self pledges in this restricted sample is overlaid to the one of all projects in Figure 1.

We use propensity score matching [see [Caliendo and Kopeinig, 2008](#), for an overview] to find the most comparable control group for our 140 *substantially self funded* projects within the subset of the 681 successfully successful projects without a self pledge. The procedure is based on the following variables: funding duration, whether the project has been featured on Startnext’s home page, number of words, videos, images on the project page or blog, number of entries on the project blog and the projects’ category. After the propensity score matching procedure, the two samples show no remaining

⁷The boundary of 40% was the result of a limited research budget for the manual collection of project data. We estimated how many projects we could possibly categorize with the available assistant hours. This arbitrary threshold is not crucial for the results, as we show with additional data in section 5.4

significant difference for any of these variables.

Table 9 in the Appendix provides descriptive statistics of our sub sample (140 substantially self funded projects and their counterparts without self funding) and of the whole Startnext sample (2,254 projects). The most common categories – across all sub samples – are movie, music and cultural education. This represents the Startnext project population well but differs from related studies on the survival/performance of projects which focus on the technology domain.

For our sample of 280 projects we manually collected two types of information. We checked the project’s homepage at Startnext for indications of complaints in the comments section. The project may not have delivered at all, there may have been quality issues or a delay. We found complaints-related information for 79 projects.

We also conducted a web search about the current status of each project.⁸ More specifically, we entered the project name in a Google search in order to find information about the project, ideally identifying the project’s web presence. In case this search did not deliver useful results we added the project’s product/service or/and the name(s) of the project creator(s). The obtained results were cross-checked to make sure that the found web presence relates to the original project and not to another activity of the project creator. Finally, we used abbreviations of the project name in case no results were found.

Outcomes of the search are used as indicators that the project did not deliver what it promised, of a one-time event, of the delivery of the product/service, that the product is still available (online), of a recurring event (e.g. an annual festival, a magazine) or ongoing activity (e.g. more books, more music tours), or of an established company/organization. We did not find any information online for six of the 140 self-funded projects. Therefore, we decided to lower the filtering boundary slightly from 40% to 37% in order to get the sample back to the original size. Likewise, eleven not self-funded projects had no online traces and we replaced them using a second propensity score matching run.

Finally, we consider the tendency of project creators to come back and run another campaign at Startnext (within our dataset) and how successful they are. [Butticè et al. \[2017\]](#) find that serial Kickstarter crowdfunders have a significant advantage in comparison to novice ones as they can draw on an established community of pledgers. If self funded projects did not do well in the perception of actual pledgers, then self funding project creators may be less successful in their attempt to attract funding in repeat campaigns or they might even try less often to try again in the first place. Thus, we collect from our main sample how many projects each creator in our subsample ran overall and how many of the repeat campaigns turned out to get funded.

⁸The search was performed in September 2017, that is, at least 3 years after projects got funded.

5 Results

5.1 Self-funding and the choice of the funding target

We first test whether self-funding project creators are farsighted and increase the funds they can collect from the crowd without incurring an additional risk of not meeting their target.

According to Hypothesis 1, if farsighted self-funding exists, we would expect self-funded projects to have, *ceteris paribus*, higher funding targets. Considering all 1,139 successfully funded projects, the average target is higher for the self-funded group (mean 4,524€, st.dev. 7,582) than for the not-self-funded group (mean 3,737€, st.dev. 6,127), a significant difference (ranksum test, $p = 0.03$).

However, results from an OLS regression with the funding target as dependent variable do not confirm this, see Table 2. The specification in column 1 uses a dummy that takes the value of one if the project was substantially self funded and a set of control variables (year the campaign ran, number of campaigns previously run by the project creator, word count of the project description, number of videos, images and blog entries (all counts are at the campaign's end)). The coefficient of the self-funded dummy is positive but not significant. Adding category dummies (specification in column 2) does not change this. The specification in column 3 adds dummies for the self pledge types that we identified as relevant. We control for the 85 projects in which funding was started by a self pledge and the 99 projects in which a pivotal self pledge was made. Results do not indicate that such projects increased their funding target.

The regression specification including self pledge type dummies, although including controls, does not yield the cleanest possible test for the potential effect of farsighted self pledges on the funding target. This is because self funded projects differ from non-self funded projects in relevant dimensions.⁹

To obtain the cleanest possible test of our hypothesis, we hence build comparable samples by propensity score matching, and then test the difference in funding targets on the resulting matched samples. Across the board, results show no significant relationship between the presence of self funding and the project target amount. This is true when considering all successfully self-funded projects ($N = 916$, difference in target amount = 375, t-test p-value = 0.44), or restricting the analysis to projects who had a pivotal self pledge ($N = 198$, difference in target amount = -1481, t-test p-value = 0.26). Moreover, this approach allows us to control for the extent of self funding by comparing projects of a specific self funding bracket to their best matches among not self funded projects. Again, results show no significant correlation for projects that have been self-funded for less than 10% ($N = 478$, difference in target amount = 245, t-test p-value = 0.55), between 10 and 20% ($N = 142$, difference in target amount = -36, t-test p-value = 0.96), between 20 and 30% ($N = 102$, difference in target amount = -1441, t-test p-value = 0.57), between 30 and 40% ($N = 104$, difference in target amount = -256, t-test p-value = 0.72), and more than 40% ($N = 130$, difference in target amount = -846, t-test p-value = 0.21).

⁹Self-funded projects have a higher success rate (66.1% vs. 43.6%); the successful ones are though still less numerous than not self pledged projects (458 vs. 681). They are significantly more likely to be featured on the Startnext web page (12% vs. 7%, t-test p-value < 0.001), feature more blog posts (4.7 vs. 3.7, t-test p-value < 0.001), more videos (1.3 vs. 1, t-test p-value = 0.022), longer descriptions (802 vs. 747 words, t-test p-value = 0.011), their campaign lasts about four days longer (61 vs. 57, t-test p-value < 0.001), and are less likely to be about fashion (2% vs. 4%, t-test p-value < 0.001).

Table 2: Relationship between self funding and funding target

	1: base regression		2: with category dummies		3: self pledge types	
Self funded	467.6	(399.9)	402.0	(395.7)	691.8	(559.4)
Duration	33.3***	(9.95)	35.2***	(10.2)	35.2***	(10.2)
Year	1932.9***	(403.6)	2001.4***	(513.8)	1988.7***	(512.4)
Previous campaigns	-274.9***	(86.7)	-228.4***	(77.1)	-245.2***	(85.0)
Word count	129.8*	(67.8)	85.0	(61.1)	81.6	(60.9)
Video	445.4***	(141.9)	422.2***	(131.4)	411.7***	(134.2)
Image	48.4*	(28.0)	41.3	(29.5)	41.7	(29.5)
Blog entries	147.8***	(41.7)	120.2***	(34.8)	115.7***	(34.3)
movie			700.8	(584.9)	752.0	(600.0)
music			-758.1**	(312.7)	-762.6**	(315.5)
event			-327.4	(356.1)	-327.0	(356.9)
theater			-632.0	(416.6)	-635.2	(417.1)
literature			-991.6**	(497.5)	-1021.5**	(499.4)
art			-1136.8***	(334.6)	-1142.6***	(335.1)
photography			-891.4**	(450.1)	-846.2*	(451.8)
invention			1691.3	(1061.5)	1715.7	(1078.1)
journalism			1246.4	(1633.0)	1282.5	(1629.5)
design			1502.5*	(796.5)	1494.6*	(803.7)
cultural-education			1563.9	(1037.4)	1560.3	(1038.9)
fashion			752.0	(1542.0)	768.3	(1543.8)
technology			8107.2	(5194.3)	8308.1	(5213.4)
games			436.7	(649.2)	424.2	(658.5)
audio-drama			278.2	(882.4)	397.4	(895.2)
comic			-1802.1***	(594.9)	-1718.8***	(626.7)
Pivotal self pledge					-741.3	(579.3)
Initial self pledge					-665.3	(679.3)
Constant	-3890621.1***	(812832.2)	-4028196.3***	(1034739.8)	-4002574.7***	(1031860.6)
Observations	1,139		1,139		1,139	

OLS regressions with robust standard errors; dependent variable is the funding target of the project; standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Result 1 *Self funded projects did not set significantly higher funding targets than not self funded projects.*

The lack of evidence of farsighted behavior means that the self pledges we observe tend to be either a honest and not anticipated way of channeling funds into the online platform that got raised offline, or a strategic but myopic use of own resources to start cascades (in-between self-pledges) or secure funding (pivotal self-pledges). The latter practice has a clear potential negative effect on the long-run project performance, as it reduces available resources. The extent to which this myopic self funding affects the long-term development will be assessed next.

5.2 Descriptives of post-campaign performance measures

Table 3 details the distribution of complaints per project, contrasting self funded versus not self funded projects. A χ^2 -test does not indicate a difference between the distributions ($p = 0.21$). We further classify complaints based on their severity. A lack of information is mentioned in 13.5% of all projects. The complaint is about the delay of the product/service in 17.9%. A quality issue is voiced in 3.9%. In 1.4%, pledgers complain that the product/service did not get delivered. Four complaints remain uncategorized: slightly modified product (twice), too expensive, lack of options to support. For none of these complaint types there is a difference between self funded and not self funded projects (χ^2 -tests,

$p > 0.23$).

Table 3: Number of complaints a project got, split by self funding (yes/no)

Number of complaints per project	0	1	2	3	4	...	11
Substantially self funded	100	23	14	3	0	0	0
Not self funded	101	27	5	5	1	0	1
Total	201	50	19	8	1	0	1

We proceed with an analysis of what happened with the 280 successfully funded projects of our sub sample after their campaign secured funding. Table 4 lists the current status of projects, separated by self funded and not self funded ones. We distinguish between the following possible statuses: the project failed (did not deliver on its promise), it delivered as promised but is inactive now, its product/service is still available, it developed into a recurring event or ongoing activity, and it established itself as a company/organization.

The overall number of failed projects is low, accounting for only 3.2% of all projects, below the lower end of the range of 5% to 14% provided by Mollick [2018] for Kickstarter. This could be due to the fact that Startnext focuses on less risky categories than Kickstarter, like music, art, or movies.

Self funded projects in our sub sample fail more often, although this difference is not statistically significant (Fisher’s exact test, $p = 0.25$). They also end up as an established venture more often than not self funded projects (χ^2 -test, $p = 0.05$).

Table 4: Post-campaign development of projects, split by self funding (yes/no)

Current status	Substantially self funded	Not self funded	Total
Failed	6	3	9
Delivered but not active anymore	46	60	106
Product/service still available	63	64	127
Recurring event or ongoing activity	8	5	13
Established company/organization	17	8	25
Total	140	140	280

Finally, we analyze whether self funding bears any consequences on the prevalence and success of future campaigns at Startnext. Table 5 shows the occurrence of repeat projects among the project creators in our subsample. The large majority of projects is the first campaign of a creator. Out of the 128 self funding creators eight ran a second campaign, while ten out of the 129 not self funding ones launched another one. From the ten self funded second projects one creator ran a third campaign, while not self funded second projects did not repeat. Among the remaining ones (five with project number more than two) there are two creators who ran further campaigns (one with one, another with five further campaigns), both self funded.

This gives us a total of 15 further projects of self funding creators and 10 of creators who did not self fund. Self funding creators succeeded 14 out of 15 times. Nine out of the ten projects of not self funding creators reached their funding target. In line with previous findings [Butticè et al., 2017, Skirnevskiy et al., 2017, Usman et al., 2019] serial project creators are, on average, more successful in getting funding

from the crowd. The tendency to self fund or not does not seem to have implications on the success of future campaigns of the respective creator.

Table 5: Repeat projects, split by self funding (yes/no)

Creator’s project number	1	2	3	...	9	...	14
Substantially self funded	128	10	1	0	1	0	0
Not self funded	129	8	2	0	0	0	1
Total	257	18	3	0	1	0	1

5.3 Self-funding’s impact on post-campaign development

We now employ a regression framework to test whether substantial self funding makes a difference with respect to the post-campaign development of projects funded by the crowd. In an ordered probit regression with robust standard errors our dependent variable is the current status of the project. We assign the value of 0 to failed projects, 1 to projects that delivered but are not active anymore, 2 when the project’s product/service is still available, 3 to recurring/ongoing projects and 4 to established companies/organizations. Our key explanatory variable is a dummy that takes the value of one if the project was substantially self funded. Control variables are the funding target, the year the campaign ran, and the number of campaigns the creator launched before. The latter can be regarded as a proxy for the quality of the management team.¹⁰ We do not consider campaign-phase controls like the number of blog entries. None of them is significantly different from zero if included in the regression.

Table 6 column 1 presents results of a base specification. The coefficient of the dummy for substantially self funded projects is not significantly different from zero. None of the control variables are correlated with future development. Adding project category dummies (column 2) shows that the future chances of success tend to be higher for audio drama projects, while they seem lower for movie and invention-based projects. The substantially self funded projects dummy remains insignificant, while the funding target is now significant at the 5%-level. This indicates that larger projects tend to run into less post-campaign troubles.

Our sample of substantially self funded projects consists of projects with pivotal self pledges and those who self funded excessively. While securing the funding target is a crucial step during a campaign, it might not necessarily mean that a significant amount of money is provided by the creator. In a further specification (column 3) we therefore replace the substantially self funded dummy with the ratio of self funding to the funding target. This results in a more direct test of the potential impact of a lack of funds on future project development. However, results do not differ. The coefficient of the self funded ratio is positive but not significantly different from zero.

Overall, our results reject Hypothesis 2. The current status of a successfully crowdfunded project is not negatively correlated with self funding. Thus, our results indicate that substantial self funding does not seem to affect subsequent project success.

¹⁰Butticè et al. [2017], Skirnevskiy et al. [2017], Usman et al. [2019] analyze reward crowdfunding platforms and show that serial entrepreneurs have higher success chances.

Table 6: Determinants of post-campaign development

	1: base regression		2: with category dummies		3: self funded ratio	
Substantially self funded	0.18	(0.13)	0.21	(0.13)		
Percentage self funded					0.51	(0.34)
Funding target (in 1k)	0.045	(0.027)	0.059**	(0.029)	0.060**	(0.030)
Year	0.017	(0.12)	0.10	(0.14)	0.13	(0.14)
Previous campaigns	0.018	(0.075)	-0.023	(0.086)	-0.028	(0.088)
movie			-0.43***	(0.17)	-0.42**	(0.17)
music			0.39**	(0.18)	0.39**	(0.18)
event			-0.37	(0.24)	-0.38	(0.24)
theater			-0.36	(0.35)	-0.38	(0.35)
literature			0.21	(0.18)	0.21	(0.18)
art			-0.31	(0.31)	-0.31	(0.31)
photography			0.38	(0.30)	0.40	(0.30)
invention			-0.85***	(0.29)	-0.84***	(0.29)
journalism			0.22	(0.28)	0.23	(0.28)
design			0.17	(0.35)	0.15	(0.35)
cultural-education			0.020	(0.24)	0.032	(0.25)
fashion			0.16	(0.55)	0.20	(0.56)
technology			0.016	(0.36)	-0.018	(0.37)
games			0.27	(0.39)	0.26	(0.40)
audio-drama			0.96***	(0.33)	0.95***	(0.32)
comic			-0.33	(0.33)	-0.36	(0.35)
Observations	280		280		280	

Ordered probit regressions with robust standard errors; dependent variable is the current status of the project; standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Result 2 *Post-campaign performance is not correlated to the extent of self funding during the campaign.*

5.4 Robustness and analysis of additional data

We proceed with several robustness checks to substantiate this result. First of all, we verified whether our results rely on pivotal projects with low levels of self funding. For this purpose we excluded pivotal projects with a self funding ratio below 37%. The coefficient of the substantially self-funded projects dummy remains positive but not significantly different from zero.

The ordered probit specification assumes a linear progression along the different categories of a project's current status. While the categorization's highest status (established company/organization) is without a doubt more advanced than low ones (failure or mere delivery of the project), there may not necessarily be a difference between each category. Therefore, we use a multinomial logit model to relax the linearity assumption. This allows us to test differences between substantially self-funded projects and not self-funded ones for each category separately. The baseline current status of the reported specification is 1, that is, projects that delivered but are not active anymore. Table 7 presents results of a multinomial logit specification with robust standard errors. The category "established company/organization" is significantly more frequent among substantially self-funded projects (5%-level), while there is no significant difference for any other category.

Our dependent variable, the current status of a project, is a discrete variable with several levels

Table 7: Multinomial logit model on the determinants of post-campaign development

	Current status categories							
	Failed projects		Product/service still available		Recurring event or ongoing activity		Established company/organization	
Substantially self funded	0.87	(0.77)	0.30	(0.30)	1.13	(0.77)	1.19**	(0.54)
Funding target (in 1k)	-0.065	(0.13)	0.059	(0.071)	-0.097	(0.19)	0.25***	(0.091)
Year	-0.15	(0.72)	0.22	(0.29)	0.74	(0.84)	0.082	(0.47)
Previous campaigns	0.091	(0.27)	-0.95**	(0.47)	0.13	(0.17)	-0.37	(0.54)
movie	1.20	(1.04)	-0.027	(0.38)	-0.52	(0.94)	-1.37*	(0.81)
music	-0.61	(1.26)	0.85*	(0.43)	1.72**	(0.69)	0.72	(0.73)
event	-15.5***	(0.98)	-2.12**	(0.83)	1.75**	(0.72)	-16.8***	(0.67)
theater	-15.3***	(1.11)	-1.46*	(0.88)	0.94	(0.97)	-16.0***	(0.72)
literature	-13.0***	(1.22)	1.65**	(0.67)	-2.04	(1.55)	0.35	(0.92)
art	-14.7***	(0.95)	-0.87	(0.68)	-1.18	(1.06)	-0.86	(1.35)
photography	-14.3***	(0.76)	0.72	(0.61)	-13.0***	(1.41)	1.16	(0.99)
invention	-15.2***	(1.15)	-1.64**	(0.83)	-14.3***	(1.31)	-17.2***	(1.51)
journalism	-15.6***	(1.13)	-0.35	(0.60)	-13.8***	(0.96)	0.88	(0.93)
design	-13.6***	(1.27)	0.78	(0.88)	-12.1***	(1.61)	0.99	(1.68)
cultural-education	1.15	(1.24)	0.16	(0.49)	1.15	(1.62)	0.24	(0.87)
fashion	-14.6***	(1.17)	0.023	(1.06)	-13.9***	(1.22)	0.41	(1.78)
technology	-0.97	(1.28)	15.8***	(1.24)	0.33	(2.66)	-2.34**	(1.09)
games	-13.3***	(1.46)	0.79	(0.91)	-12.2***	(1.55)	1.85	(1.27)
audio-drama	2.31	(1.67)	16.4***	(0.95)	17.2***	(1.33)	16.9***	(1.40)
comic	-15.0***	(1.21)	-1.92*	(1.05)	1.46	(1.18)	-16.7***	(1.59)
Constant	297.7	(1442.1)	-435.6	(593.5)	-1502.2	(1687.6)	-167.7	(940.9)
Observations	280							

Multinomial logit regression with robust standard errors; dependent variable is the current status of the project; "Delivered but not active anymore" is the baseline outcome; standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

ranked by the project's development. In our categorization we have distinguished between recurring or ongoing projects (like a yearly festival) and projects that established themselves as a company or organization. This distinction could be regarded as artificial, since it may well depend on the nature of the actual project, whether the project evolves into something formally established or remains a recurring activity. Table 8 column 1 presents results of a regression specification in which we have merged the recurring/ongoing and established categories into one. Results are robust to the merging of the two categories.

Another possibility might be that only extreme self funding bears negative consequences on future development. For this purpose we only consider projects that received less than half of their funding target externally. However, the distribution of the resulting 31 projects' current status does not indicate a difference. One of them failed, while eight established a company or became a recurring event.

Finally, this null result could be just an artifact of low power. Given the substantial share of self funding in our projects, though, the effect we are looking for should be substantial. Under Hypothesis 2, post-campaign quality issues are a function of the amount of money self-funded, i.e., not raised and hence not available for the project delivery/development. Since this share is quite high in the self funded sample (average of 35%), under Hypothesis 2 the problems should be moderate to severe, and our sample size should be enough to detect them. The absence of an effect on any level and with different specifications suggests that problems, even if they exist, are minor and rare.

To make sure that a lack of power is not a possible explanation for not finding an effect, we expanded

our sample of self-funded projects. We collected current status data for 224 additional projects. These additional data cover self funding from 5% to 37%. Thus, these are the most self-funded projects among the remaining data which means that only projects with low self funding shares (i.e., less than 5%) remain uncategorized with respect to post-campaign development. Table 8 shows results. Columns 2 and 3 present ordered probit regressions with the current status as dependent variable. There is again no correlation between the current status and the self-funded dummy. The coefficient of the self funded ratio is positive and significant at the 5%-level. Thus, the results substantiate our earlier analysis.

Table 8: Robustness and analyses with additional data

	1: robustness		2: self funded dummy		3: self funded ratio	
Substantially self funded	0.13	(0.13)	-0.013	(0.11)		
Percentage self funded					0.62**	(0.30)
Funding target (in 1k)	0.052*	(0.028)	-0.011	(0.0099)	-0.011	(0.0096)
Year	0.13	(0.13)	-0.0072	(0.097)	0.014	(0.093)
Previous campaigns	0.0014	(0.098)	-0.089	(0.065)	-0.092	(0.070)
movie	-0.48***	(0.17)	-0.26**	(0.12)	-0.27**	(0.12)
music	0.33*	(0.18)	0.32**	(0.13)	0.29**	(0.13)
event	-0.31	(0.27)	-0.098	(0.19)	-0.11	(0.19)
theater	-0.16	(0.37)	-0.47**	(0.20)	-0.50**	(0.20)
literature	0.13	(0.17)	0.15	(0.18)	0.16	(0.17)
art	-0.42	(0.30)	-0.56***	(0.22)	-0.58***	(0.21)
photography	0.33	(0.29)	-0.0065	(0.24)	-0.077	(0.23)
invention	-0.96***	(0.29)	-0.23	(0.33)	-0.21	(0.33)
journalism	0.11	(0.26)	-0.20	(0.21)	-0.19	(0.21)
design	0.31	(0.42)	-0.15	(0.28)	-0.14	(0.29)
cultural-education	0.073	(0.23)	0.10	(0.18)	0.14	(0.18)
fashion	-0.012	(0.51)	-0.011	(0.41)	0.022	(0.42)
technology	-0.012	(0.35)	0.48**	(0.24)	0.26	(0.27)
games	0.42	(0.42)	0.11	(0.34)	0.13	(0.34)
audio-drama	0.90***	(0.31)	0.92***	(0.27)	0.92***	(0.26)
comic	-0.27	(0.39)	-0.46	(0.28)	-0.52*	(0.29)
Observations	280		504		504	

Ordered probit regressions with robust standard errors; dependent variable is the current status of the project; standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

6 Summary

Reward crowdfunding promises entrepreneurs quick access to large audiences, a vital connection with future customers, and the possibility to go viral. It also brings benefits for consumers as they can choose from a widened variety of innovative products and services. Yet, its rather informal processes may also open up hazards for the pledgers, who have little legal protection from an eventual opportunistic act of the project creator. Reining in opportunism and establishing itself as a reliable funding channel is a crucial challenge for crowdfunding to continue to prosper.

The prevalence of opportunism in crowdfunding and how opportunistic behavior can be detected and avoided are therefore relevant questions. Our study addresses these topics through the lens of one facet of opportunistic behavior, self funding. Our economic framework of self-funding allows for

two types of project creators who self pledge. Farsighted self-funders anticipate that they will have the option of a self pledge when they set their funding target. Consequently, they increase the target by the amount of their available cash. This increases the funds they may get from the crowd in a risk-free way: if the campaign threatens to fall short of the target, they will – if possible – chip in the remainder. Myopic self-funders do not adjust their funding target upwards. They decide to self pledge “spontaneously” when they realize their campaign is in trouble. Such impulsive behavior – yet with strategic intentions – is what we hypothesized might spell trouble for the long-term viability of crowdfunded projects, as it is likely to result in projects falling short of the funds needed to successfully deliver on the project promises.

Our study contributes to the nascent literature on crowdfunding’s robustness to attempts of opportunistic behavior [e.g., [Cumming et al., 2020](#)], by exploiting Startnext data’s uniqueness of allowing self pledges. Its contribution is threefold. First, we find no evidence that the widespread strategic use of self pledges [as documented by [Crosetto and Regner, 2018](#)] is connected to farsighted anticipation of such behavior. Second, we show that self-funding, even considerable amounts of it, has no significant impact on the long-term performance of projects. Third, we document the number and nature of post-campaign paths and problems experienced by projects at Startnext, showing that the rate of failure at Startnext is considerably lower than documented on other platforms [e.g., [Mollick, 2018](#)].

7 Contribution, limitations and future research

In the following, we elaborate on the theoretical and practical contributions of our study and its limitations. We first discuss to what extent our results can be generalized to reward crowdfunding as a whole. Subsequently, we present implications of our findings for theory. Finally, we outline future research paths.

Our results may fail to generalize outside of Startnext as self pledges are forbidden at most platforms. On platforms where self-funding is officially banned, adverse selection means that project creators willing to engage in them are the ones with less to lose, lower moral standards, or an outright intention to cheat. Our data come from a platform where self pledges are explicitly allowed – in order to have a channel for project funds collected offline. Hence, the adverse selection is arguably lower. The very fact that self pledges are allowed would, in this line of reasoning, reduce their negative impact, thus limiting the generalizability of our findings to platforms where self funding is banned. While we cannot rule out that Startnext is populated by good guys only, our analysis shows that the timing, amount, and context in which self pledges are made single them out as strategic acts. Self pledgers *do* try to manipulate pledgers to achieve their goals – especially *via* pivotal self pledges that secure funding, or by self pledging large parts of their overall funding. While we have no evidence that they *anticipate* their actions and plan accordingly, we have large evidence of the behavior itself.

The standard assumption about a shortage of externally raised funds – as adhered to in our theoretical framework – is that falling short of the required amount increases the chances of subsequent project failure. Our results do not confirm this line of reasoning. Alternatively, self funding may be an expres-

sion of entrepreneurial commitment. If project creators are convinced of their venture, they will put in the remaining funding in case the campaign threatens to fall short. Consequently, self-funded projects would have a higher chance of doing really well. This would explain the fact that the establishment of a company/organization, our highest rated outcome for a project, is significantly more common among self-funded projects (17 versus 8 projects). It might also shed light onto why we have null results – there might be large heterogeneity in types of self funders, a heterogeneity that we cannot identify with our data.

Generally, our findings provide evidence that concerns about negative implications of self funding on the development chances of projects appear unwarranted. Nevertheless, we cannot rule out that other behavioral drivers are at work. It is possible that self-funding project creators have chosen the crowdfunding channel not mainly for funding reasons but due to other benefits (e.g., publicity, marketing, product feedback), [see, for instance, [Da Cruz, 2018](#)]. They might not be cash-constrained which could explain why we do not find negative consequences on post-campaign development. Even if this line of argument could in principle be an alternative explanation for our results, it rests on the assumption that the entrepreneurial finance aspect of crowdfunding is negligible. We do not think such an assumption is realistic. It remains for future research to study to what extent non-financial aspects matter in crowdfunding and what this means for (allowing) self-funding.

Tobias Regner is a research fellow at the University of Jena, Germany. He holds an M.A. from the University of Munich and a Ph.D. from the University of Bristol, UK, both in Economics. He is the principal investigator of a three-year research project on “Crowdfunding: an alternative financing option for entrepreneurs and creators?” funded by the German Research Foundation. He published more than a dozen articles on crowdfunding, game theory and behavioral economics.

Paolo Crosetto holds a PhD in Economics from the Università degli Studi di Milano, Milan, Italy, (2010). After one post-doc at LUISS, Rome, Italy (2010), and a second one at the Max Planck Institut of Economics in Jena, Germany (2011-13), joined INRA – French Institut for Agronomic Research – as a Researcher in 2013, working in GAEL, the Grenoble Applied Economics Laboratory. Since January 2020, Director of Research at INRAE-GAEL. He published extensively on risk attitudes, food labeling, innovation and crowdfunding.

References

- Mario Daniele Amore, Cedric Schneider, and Alminas Žaldokas. Credit supply and corporate innovation. *Journal of Financial Economics*, 109(3):835–855, 2013.
- Francesco Paolo Appio, Daniele Leone, Federico Platania, and Francesco Schiavone. Why are rewards not delivered on time in rewards-based crowdfunding campaigns? an empirical exploration. *Technological Forecasting and Social Change*, 157:120069, 2020.
- Alexander Brem, Volker Bilgram, and Anna Marchuk. How crowdfunding platforms change the nature of user innovation—from problem solving to entrepreneurship. *Technological Forecasting and Social Change*, 2017.
- Vincenzo Buttice, Massimo G Colombo, and Mike Wright. Serial crowdfunding, social capital, and project success. *Entrepreneurship Theory and Practice*, 41(2):183–207, 2017.
- Marco Caliendo and Sabine Kopeinig. Some practical guidance for the implementation of propensity score matching. *Journal of economic surveys*, 22(1):31–72, 2008.
- Gilles Chemla and Katrin Tinn. Learning through crowdfunding. *Management Science*, 2019.
- Andy Cosh, Douglas Cumming, and Alan Hughes. Outside entrepreneurial capital. *The Economic Journal*, 119(540):1494–1533, 2009.
- Paolo Crosetto and Tobias Regner. It’s never too late: funding dynamics and self-pledges in reward-based crowdfunding. *Research Policy*, 47(8):1463–1477, 2018.
- Douglas J Cumming, Lars Hornuf, Moein Karami, and Denis Schweizer. Disentangling crowdfunding from fraud-funding. *Max Planck Institute for Innovation & competition research paper*, (16-09), 2020.
- Jordana Viotto Da Cruz. Beyond financing: crowdfunding as an informational mechanism. *Journal of Business Venturing*, 33(3):371–393, 2018.
- Steven Dresner. *Crowdfunding: a guide to raising capital on the Internet*. John Wiley & Sons, 2014.
- Nils Eiteneyer, David Bendig, and Malte Brettel. Social capital and the digital crowd: Involving backers to promote new product innovativeness. *Research Policy*, 48(8):103744, 2019.
- Matthew Ellman and Sjaak Hurkens. Optimal crowdfunding design. *Journal of Economic Theory*, 184:104939, 2019.
- Christa Hainz. Fraudulent behavior by entrepreneurs and borrowers. In *The Economics of Crowdfunding*, pages 79–99. Springer, 2018.
- KickstarterForum. Is it morally acceptable to fund your own kickstarter? 2014. URL <http://www.kickstarterforum.org/is-it-morally-acceptable-to-fund-your-own-kickstarter-t3185.html> (accessed June 11, 2020).
- Tse-Chun Lin and Vesa Pursiainen. Fund what you trust? social capital and moral hazard in crowdfunding. 2017.
- Ethan Mollick. The dynamics of crowdfunding: An exploratory study. *Journal of Business Venturing*, 29(1):1–16, 2014.
- Ethan Mollick. The unique value of crowdfunding is not money – it’s community. *Harvard Business Review*, 2016.

- Ethan Mollick. Crowdfunding as a font of entrepreneurship: Outcomes of reward-based crowdfunding. In *The Economics of Crowdfunding*, pages 133–150. Springer, 2018.
- Stewart C Myers and Nicholas S Majluf. Corporate financing and investment decisions when firms have information that investors do not have. *Journal of financial economics*, 13(2):187–221, 1984.
- Raghuram G Rajan and Luigi Zingales. Financial dependence and growth. *American Economic Review*, pages 559–586, 1998.
- Paolo Roma, Antonio Messeni Petruzzelli, and Giovanni Perrone. From the crowd to the market: The role of reward-based crowdfunding performance in attracting professional investors. *Research Policy*, 46(9):1606–1628, 2017.
- Sunghan Ryu and Keongtae Kim. The effect of crowdfunding success on subsequent financing and exit outcomes of start-ups. 2017.
- Francesco Schiavone. Incompetence and managerial problems delaying reward delivery in crowdfunding. *Journal of Innovation Economics & Management*, (2):185–207, 2017.
- Robert Shiller. Crowdfunding or crowdphishing?.[op-ed]. 2015.
- Michael Siering, Jascha-Alexander Koch, and Amit V Deokar. Detecting fraudulent behavior on crowdfunding platforms: The role of linguistic and content-based cues in static and dynamic contexts. *Journal of Management Information Systems*, 33(2):421–455, 2016.
- Vitaly Skirnevskiy, David Bendig, and Malte Brettel. The influence of internal social capital on serial creators' success in crowdfunding. *Entrepreneurship Theory and Practice*, 41(2):209–236, 2017.
- Michael A Stanko and David H Henard. Toward a better understanding of crowdfunding, openness and the consequences for innovation. *Research Policy*, 46(4):784–798, 2017.
- Roland Strausz. A theory of crowdfunding: A mechanism design approach with demand uncertainty and moral hazard. *American Economic Review*, 107(6):1430–76, 2017.
- Sardar Muhammad Usman, Farasat Ali Shah Bukhari, Muhammad Usman, Daniel Badulescu, and Muhammad Safdar Sial. Does the role of media and founder's past success mitigate the problem of information asymmetry? evidence from a uk crowdfunding platform. *Sustainability*, 11(3):692, 2019.

Appendix

A. Summary statistics

Table 9: Summary statistics by sub samples

	Failure		Success		Restricted sample	
	Not self funded	Self funded	Not self funded	Self funded	Not self funded	Self funded
Project successfully funded	0	0	1	1	1	1
Self funded	0	1	0	1	0	1
Funding target	7730.3 (15916.1)	10816.9 (65469.4)	3737.4 (6127.8)	4524.1 (7582.0)	2880.7 (1873.1)	3528.4 (2633.4)
Duration	59.64 (25.49)	64.60 (27.79)	53.17 (23.70)	58.88 (22.54)	58.11 (23.28)	57.01 (22.38)
Word count	752.9 (363.5)	765.2 (360.0)	740.6 (357.3)	822.3 (579.2)	769.2 (384.6)	798.8 (387.8)
Video count	0.769 (1.841)	0.643 (1.046)	1.339 (2.362)	1.614 (3.217)	1.014 (1.904)	1.029 (2.011)
Image count	5.891 (4.761)	7.570 (22.48)	9.153 (7.445)	8.517 (6.672)	8.457 (5.901)	8.621 (6.996)
Blog count	2.975 (3.504)	3.234 (3.347)	4.545 (4.855)	5.424 (5.906)	4.607 (4.589)	4.571 (4.226)
Recommended	0.0125 (0.111)	0.00851 (0.0921)	0.141 (0.348)	0.172 (0.378)	0.150 (0.358)	0.143 (0.351)
movie	0.305 (0.460)	0.260 (0.439)	0.304 (0.460)	0.384 (0.487)	0.379 (0.487)	0.414 (0.494)
information	0.0193 (0.138)	0.0340 (0.182)	0.0220 (0.147)	0.0197 (0.139)	0.0571 (0.233)	0.0429 (0.203)
invention	0.0648 (0.246)	0.0936 (0.292)	0.0250 (0.156)	0.0262 (0.160)	0.0429 (0.203)	0.0214 (0.145)
event	0.125 (0.331)	0.123 (0.330)	0.116 (0.320)	0.0961 (0.295)	0.0786 (0.270)	0.0857 (0.281)
theater	0.0818 (0.274)	0.0766 (0.267)	0.104 (0.306)	0.0677 (0.251)	0.0286 (0.167)	0.0500 (0.219)
music	0.190 (0.392)	0.191 (0.394)	0.325 (0.469)	0.290 (0.454)	0.257 (0.439)	0.264 (0.443)
art	0.0909 (0.288)	0.0723 (0.260)	0.0764 (0.266)	0.0699 (0.255)	0.0571 (0.233)	0.0714 (0.258)
literature	0.109 (0.312)	0.115 (0.320)	0.0499 (0.218)	0.0786 (0.269)	0.0857 (0.281)	0.0929 (0.291)
photography	0.0886 (0.284)	0.0809 (0.273)	0.0514 (0.221)	0.0611 (0.240)	0.0643 (0.246)	0.0786 (0.270)
journalism	0.0614 (0.240)	0.0553 (0.229)	0.0543 (0.227)	0.0808 (0.273)	0.0857 (0.281)	0.0714 (0.258)
audiodrama	0.0216 (0.145)	0.00426 (0.0652)	0.0191 (0.137)	0.0131 (0.114)	0.0214 (0.145)	0.0214 (0.145)
design	0.0750 (0.264)	0.0723 (0.260)	0.0441 (0.205)	0.0349 (0.184)	0.0429 (0.203)	0.0357 (0.186)
games	0.0443 (0.206)	0.0511 (0.221)	0.0264 (0.161)	0.0218 (0.146)	0.0357 (0.186)	0.0214 (0.145)
fashion	0.0420 (0.201)	0.0298 (0.170)	0.0279 (0.165)	0.0109 (0.104)	0.0286 (0.167)	0.0143 (0.119)
comic	0.0102 (0.101)	0.0128 (0.113)	0.0132 (0.114)	0.00873 (0.0931)	0.0214 (0.145)	0.0143 (0.119)
cultural-education	0.110 (0.313)	0.106 (0.309)	0.106 (0.308)	0.127 (0.333)	0.136 (0.344)	0.107 (0.310)
technology	0.0159 (0.125)	0.0170 (0.130)	0.00294 (0.0542)	0.00218 (0.0467)	0 (0)	0.00714 (0.0845)
N	880	235	681	458	140	140