Optimizing Reward-Based Crowdfunding

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OPTIMIZING REWARD-BASED CROWDFUNDING

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Abstract

In this paper, we have provided insight into reward-based crowdfunding (RBCF). Individual ownership or temporary usage products and four different types of rewards have been evaluated — prototype, branded promotional item, special edition, and discount. We have determined whether intrinsic or extrinsic motivational strategies and the timing of the reward play a significant role. We have found that individual ownership items received more funding than temporary usage products. Certain rewards are more effective than others in garnering contributions from backers and we have identified the cases where this occurs. RBCF knowledge is important, and we have provided recommendations for entrepreneurs about how to appropriately structure their call for funding.

Keywords

Reward crowdfunding, investor motivation, products, rewards, self-determination theory

I. INTRODUCTION

Crowdfunding has evolved as an alternative option to finance a wide range of activities, such as startup companies, new products, movies, music, and social responsibility initiatives, to name a few.

Crowdfunding allows many new entrepreneurial ventures to access creative financial vehicles in addition to traditional ones. It enables these startups to secure funds from the onset of an innovative project.

Crowdfunding is the process of raising money for a project from a large group of dispersed backers, connected through a web platform [1], [2]. It takes on many forms depending on the bounty provided to backers: donation models, equity models, lending-based models, and reward-based models [3].

In *donation-based crowdfunding*, nothing is provided by the entrepreneurs to the backers in exchange for their financial support. While obtaining no monetary or material benefit, people make contributions to support, for example, a particular humanitarian cause to reach its financial goals [4].

Equity-based crowdfunding seeks to sell a business stake to investors in exchange for capital [5]. The concept is comparable to purchasing or selling shares to a venture capitalist—similar to traditional private equity investment procedures.

The third model—*lending-based crowdfunding*—which focuses on borrowing money from the crowd, which in turn will be paid back to investor with interest [6]. It is similar to regular debt borrowing, except that entrepreneurs borrow from several investors and funds are provided by multiple independent borrowers [7].

Reward-based crowdfunding (RBCF) is based on contributors giving to a cause or organization to receive a non-monetary reward [8], such as gadgets, at a later point in time [9].

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With more than 2,000 active web-based platforms, and an estimated $14 billion in market value in 2021 [10], the total amount of money raised through crowdfunding is predicted to reach $30 billion by 2025. This situation will have a broader impact given the potential expansion of crowdfunding into developing nations, where it is currently uncommon [11].

Interest in crowdfunding is continuously growing [12], [13], thanks to the spread of web platforms and the amount of funds raised. Crowdfunding has fueled the success of companies like Revolut, Allbirds, Brooklinen and Peloton, and it is now being increasingly regulated by financial institutions worldwide [14].

Information technology characteristics have supported two critical dimensions of the crowdfunding model: (a) The Internet enables the collection of modest payments from a large pool of global donors, while utilizing a "crowd" can significantly reduce transaction costs. The accumulation of small numerous pledges can lead to sizable funding. (b) Without the aid of an active intermediary, it is now possible to directly link funders online with entities seeking financial assistance. In addition, crowdfunding requires less due diligence than traditional forms of financing, thereby making the financing process smoother and faster.

While it is easier to reach backers through web-based platforms, a model built with this kind of relationship does not allow for direct interaction between project proponents or developers and their potential investors. Many projects fail and never reach the marketplace, even after funds are raised. For these reasons, backers must rely on signals of organizational traits [15], linked to future business success, to make more informed decisions about whether to provide funds to projects based on prospects for success [16], [17].

These signals are needed due to a lack of regulations, inexperienced backers as investors, and a limited interaction between backers and founders. These characteristics also make it less likely that people would contribute money to a fundraising appeal, highlighting the necessity for strong signals to potential backers, especially considering that several projects fail and never reach the market [17], [18].

Since this approach is used for many recently established entrepreneurial companies requiring financial resources, a significant deal of attention is paid to signals that increase funding [4].

RBCF deserves particular attention due to its global popularity [18], [19]. Previous studies have investigated which signals influence a backer's choice to support an RBCF campaign [20]. However, little is understood about two important distinguishing characteristics of RBCF projects: product and reward categories.

We will now provide insight into these two important characteristics.

II. INVESTMENTS AND REWARDS

An important RBCF issue is knowing which factors contribute to campaign success [21]. *Signaling theory* is a widely used concept to understand RBCF campaign success [22]. Specifically, founders provide signals to backers on which RBCF initiatives are more likely to be implemented.

We completed a study on this issue. In our study [19], we concentrated on product and reward types because these two dimensions represent clear signals for backer exposure and can be readily interpreted by the crowd. They influence backer willingness to invest money.

There are two main product types: (1) products for individual use—when customers can buy and own a product; and (2) products for temporary use—classified as forms of sharing economy or “servitization” of products where individuals provisionally access the product.

Servitization has grown in recent years. For example, the company Share Now is a joint venture between the car manufacturers BMW and Mercedes-Benz. These companies provide a car-sharing service that enlarges their offerings—from individual use to shared use.

Alternatively, several companies are integrating their offerings by expanding their products or services from servitization to individual use. For example, the company Cooltra a moped-sharing service for temporary usage, enhanced its service

by proposing long-term monthly rentals where users can select their motorcycle.

Both types of products—for individual ownership or for temporary usage—can be simultaneously successful. They can each stimulate different interests among customers. Entrepreneurial founders should leverage these different motivations in order to deliver signals that more appropriately drive RBCF backer intentions to fund a project. These funding intentions are dependent upon the type of the product offering.

We initially argue that products for individual ownership are more likely to get funding for an entrepreneurial initiative when compared to *temporary use* (shared) products. Given that backers are not usually experts, they require signals for project trustworthiness, and individual ownership products appear to be more reliable than temporary use ones. This dependence on web-based platforms (think about sharing economy services) adds complexity, thereby instilling backers with uncertainty.

For example, sharing economy services will rely on complex, web-based platforms and a significant number of actors using the service. Product value is usually higher for highly diffused products in the market. This is because the more users there are, the more useful and desirable a particular product becomes. The same effect can be applied to backing campaigns, where the more people invest, the more likely the campaign will be successful.

The second characteristic is the type of reward associated with an RBCF project. Normally backers receive a reward in return for their funding. Rewards can trigger extrinsic or intrinsic motivations for backers. Backers can get rewards before or after effective product commercialization.

RBCF backers support entrepreneurs' goals in a different way from other crowdfunding approaches, both from intrinsic and extrinsic reward perspectives. Both of these rewards are connected to a project's outcome [23]. Product qualities, utility, level of social and environmental impact are potential factors related to intrinsic motivations that support development and introduction innovative products.

Conversely, backers may also be extrinsically motivated through material or monetary rewards. These rewards may be associated with the product itself or with the return on investment.

These motivations are in contrast to equity-based crowdfunding (EBCF) and lending-based crowdfunding (LBCF), in which backers are exclusively moved by extrinsic motivations. These crowdfunding approaches resemble conventional investments that produce a return. Also unlike donation-based crowdfunding (DBCF) (which is usually intrinsic) the combination of intrinsic and extrinsic motivations is unique to RBCF [4].

Several reward types can leverage the intrinsic or the extrinsic side of a backer's motivations. We argue that intrinsic motivations are more effective than extrinsic motivations driving backer investment choices. Intrinsically motivated backers voluntarily participate in technology-mediated interactions—as in RBCF—stimulating a sense of pleasure and fun from the entrepreneurial projects they support.

Rewards can also be grouped by timing of the reward. There are rewards given before product commercialization and there are rewards that occur after product commercialization. Uncertainties surrounding RBCF project completion improve the chance of obtaining ex-ante rewards—before commercialization.

We contend that the effectiveness of the reward timing—before or after product commercialization—will depend on product type, whether it is individual ownership or temporary usage products.

We sought to understand how intrinsic versus extrinsic motivations combine with ex-ante versus ex-post commercialization in driving RBCF project success. We also sought to determine if and how these combinations change for individual ownership versus temporary use products. The results of this study are, therefore, of interest for a wide audience of organizations, entrepreneurs and backers involved in RBCF campaigns.

III. METHODOLOGY

We now provide a brief overview of the methodology, more details can be found in Cappa

and colleagues [19]. A subject survey-based experiment helped us to investigate the effects of product and reward types on monetary amounts committed by supporters in an RBCF context.

The experiment sought to measure pledge intentions—specifically how certain product attributes may increase the desire to donate money to a specific business initiative. Pledge intention is employed and has been acknowledged in the literature as an effective proxy for the actual result a product may accomplish in a genuine crowdsourcing campaign [24], [25].

We surveyed 182 university students, aged between 20 and 26, who were either undergraduate or graduate students, at an Italian university, during the 2019-2020 academic year. Such a sample represents a typical audience of RBCF campaigns and therefore the results are representative of the results from a funding call. We conducted an experiment whereby each respondent was asked to indicate the amount of money they were willing to fund for personal ownership and for temporary use products, in case of different rewards for each of the two products. Each type of reward leverages a specific motivation and timing for being awarded to the backers. In other words, we considered how the intention to pledge differs across various product types mentioned in an RBCF campaign—individual ownership or temporary use items, the reward typology that drives either extrinsic or intrinsic motivation, and the timing of the reward (before or after the product commercialization).

The following combinations were designed for an individual ownership product: a prototype (*intrinsic motivation-ex-ante commercialization*), a branded promotional item (*extrinsic motivation-ex-ante commercialization*), a special edition of the product (*intrinsic motivation-ex-post commercialization*), or a discount (*extrinsic motivation-ex-post commercialization*).

The following options were designed for a temporary use product: early access to the service (*intrinsic motivation-ex-ante commercialization*), a branded promotional item (*extrinsic motivation-ex-ante commercialization*), a special edition of the product (*intrinsic motivation-ex-post commercialization*), or a discount (*extrinsic motivation-ex-post commercialization*).

IV. RESULTS

The findings suggest that, on average, RBCF projects based on individual ownership products raise more funds than those associated with temporary usage products. Individual ownership products, compared to temporary usage ones, provide greater trust that the project will be completed successfully, thereby motivating backers to invest greater amounts of money.

Some rewards are more successful at attracting money from backers than others. Yet, this relationship changes depending on the product type offered in the RBCF campaign.

We found that rewards based on intrinsic motivation, —using a special edition of the product as a reward, —and ex-post product commercialization (Figure 1 for summary results of an individual ownership product) raised more money.

Ex-ante product commercialization and an intrinsic motivation type of reward—a prototype of the product—also had positive effects on funds raised but to a lesser extent. Each of the other types of rewards did not have a positive impact on the funds raised.

Regarding temporary use—shared products (see Figure 2 for a summary of results), we found intrinsic motivations and rewards based on ex-post product commercialization—a special edition of the product—resulted in greater funds raised. The remaining types of rewards did not have a positive effect on the funds raised.

Rewards associated with ex-post commercialization always signal a higher likelihood of success. Backers have the feeling that the entrepreneurs are reliable and capable of implementing the project and will likely reach the market. Ex-ante rewards are less likely to receive funds. This effect is even stronger for temporary usage products that already suffer from a lack of confidence by backers, who perceive greater complexities and uncertainties related to the potential release of the product to market.

These findings are useful to better understand what types of products and rewards can have the best results in RBCF campaigns. This improved insight is important given that backers are not

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professionals and give their money primarily out of a sense of satisfaction for supporting what they view as worthwhile entrepreneurial projects. They also look for signs of trust that the project will be effectively realized.

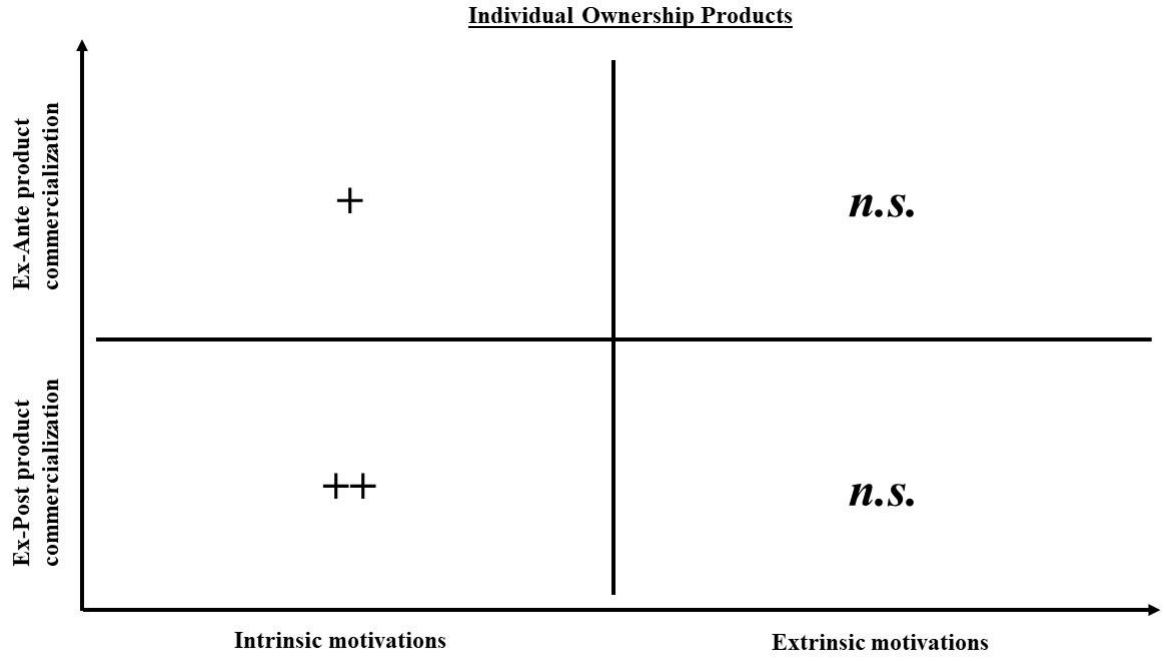

Figure 1 – Impact of type of ex-ante vs ex post commercialization and intrinsic vs extrinsic motivations on Individual Ownership Products funds raised (source: authors' elaboration on Cappa et al., 2022)."+" and "++" indicate a positive relationship, while "n.s.", i.e., non-significant, indicates that no relationship was found).

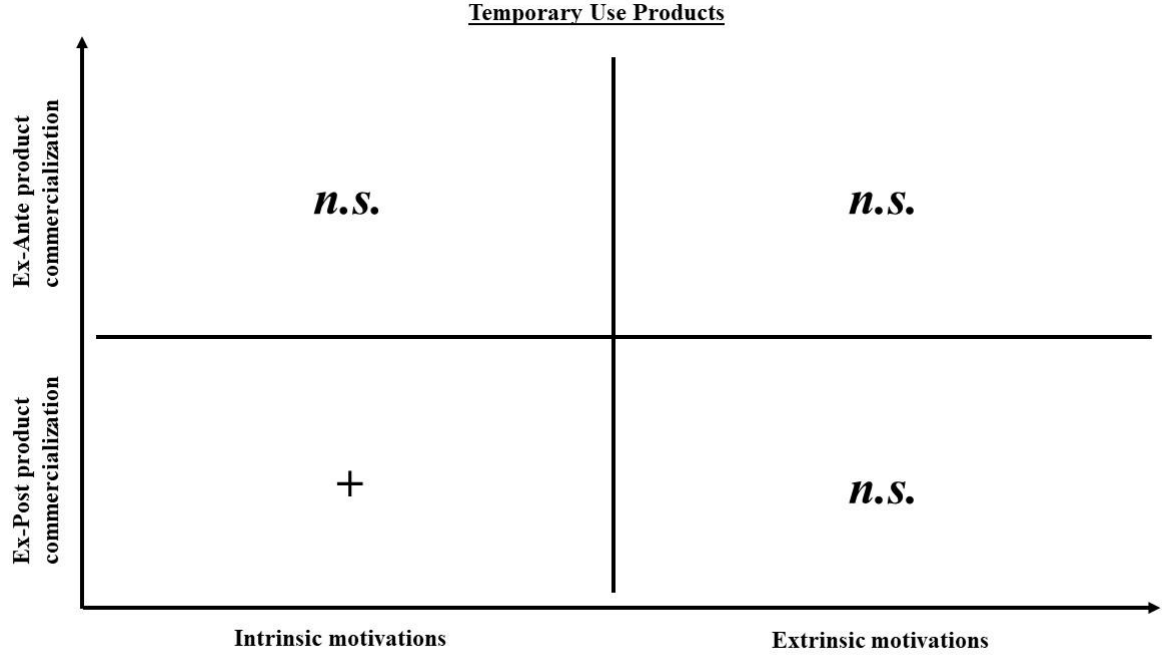

Figure 2 - Impact of type of ex-ante vs ex post commercialization and intrinsic vs extrinsic motivations on Temporary Use Products funds raised (source: authors' elaboration on Cappa et al., 2022)."+" indicate a positive relationship, while "n.s.", i.e., non-significant, indicates that no relationship was found).

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V. PRACTICAL IMPLICATIONS AND CONCERNS

The results of this study provide evidence that motivation type and reward timing can affect RBCF campaign financing performance. There is some affect for both types of products that we considered. These findings can support entrepreneurial decision making—especially when seeking to launch an RBCF campaign. The results in Figures 1 and 2 provide important organizational and managerial insights.

Products for individual ownership typically result in greater than average funding. But there are more nuanced, specific conditions that contribute to the money raised for both individual ownership and temporary usage products. The indications are that the most beneficial type of reward, in terms of fundraising, includes ex-ante or ex-post product commercialization and of leveraging intrinsic or extrinsic motivations. We determined that rewards leveraging intrinsic motivation ex-post commercialization is the most effective. Also ex-ante leveraging intrinsic motivation is effective. Temporary usage product rewards were beneficial in raising RBCF funds—only when leveraging intrinsic motivations ex-post commercialization.

There are three main practical takeaways from these results when entrepreneurs seek to raise funds using RBCF.

First, special edition of product rewards work best for each product type. Offering this kind of reward implies that a product is finalized and is ready to be used. It will also mean that any special features have been developed. Thus, marketing efforts on which the special edition should be developed are crucial. This outcome provides evidence that R&D and marketing functions might collaborate from the start of new entrepreneurial ventures.

However, attention must be given to carefully control the number of special editions. If an excessive number of these special editions is provided, its uniqueness is likely to be lost. Alternatively, if the number of special edition products are too small, the campaign may not achieve fund raising goals. Thus, this challenging balance needs to be evaluated carefully given the industry, situation, goals, and expectations of the organization.

Second, while attention is often focused on funding campaign elements, we have demonstrated that product characteristics play an important role. For individual ownership products, prototypes can be offered as a reward. Yet, temporary usage product prototypes—usually due to complexities—do not assure usability of the product. This type of environment may not be effective in convincing backers to provide funds. Fine tuning between the type of reward and type of product is needed; and timing of the reward also plays a role (as seen next).

Third, as the most effective rewards have been highlighted to be prototypes and special editions, entrepreneurs should pay attention to the timing for delivering the product and consequently also the duration of the RBCF campaign. Products sometimes take months to finalize the product development. If backers are interested in receiving prototypes or special editions they will implicitly evaluate at how long it will take to receive them. Giving clear and direct expectations on timing is important in this context. Organizations should also consider more rapid development of prototypes to be able to at least provide earlier post-ante provisions and rewards.

VI. CONCLUSION

Securing external financial resources is essential for new entrepreneurial endeavors since entrepreneurs lack the necessary cash flows to initiate new ventures. Thus, the aforementioned insights provides guidance about how to maximize fundraising efforts and allow the growth of more entrepreneurial projects, which is extremely relevant to the economic development of countries [26], [27]. This paper aims to provide strategic suggestions about how to properly build an RBCF call for funding from the ground up. Before launching the campaign, it is important to understand the characteristics of the products and the perceived value of their features by backers, and the possible rewards that can be offered. This will help to craft a strong message that should stimulate the right backers' motivations through the proper reward, whether the product to be crowd-funded is for individual ownership or temporary use. By following these steps, entrepreneurs can ensure their RBCF campaigns have the best chance of success.

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