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Many Are Never Too Many: An Analysis of Crowdfunding Projects in Brazil

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Abstract: This paper analyzed the most important aspects for the success of crowdfunding projects observing the Kickante platform, an important crowdfunding Brazilian platform. We found that the total value per project increased with the number of investors. The value per investor increased with the minimum value invested with rewards and with certain types of promoters (like informal groups or new companies) or with startups.

Keywords: crowdfunding; crowdsourcing; networking

JEL Classification: C26; O16; O32

1. Introduction

Crowdfunding is a relatively recent phenomenon, which has expanded rapidly throughout the world. It is a model of funding based on online platforms that has gained a special impetus from social networks (Kickante 2018). The crowdfunding proposal is similar to crowdsourcing, which consists of resolving problems or collecting innovative processes, involving the collaboration of people in social networks (Kickante 2018).

According to Mourão and Costa (2015), in crowdfunding projects, the investor may not gain a tangible benefit. There are two main forms of campaign modalities: (i) the promoter only receives the money if the target is fully achieved during the campaign and (ii) the promoter gets everything regardless of whether or not the campaign's target is achieved.

The crowdfunding model can represent an interesting possibility of leveraging personal projects, in more favorable financial conditions than other types of investment.

From the point of view of investors, a relevant aspect that influences the decision is the reward that they will receive for contributing. The different kinds of reward strategies can be relevant, and these were analyzed by Araújo and Verschoore Filho (2017). In this research they indicated that there are some conditions that contribute to the success of the project, for example, the exclusivity condition (when the project uses limited edition rewards, which remain available only during the project campaign) or pre-acquisition (when a person buys the product in advance for a price below its market release value). These authors conclude that the main factors of a successful crowdfunding project are not limited to reward strategies.

This paper was developed in order to determine the successful aspects of projects financed by crowdfunding in the Brazilian platform "Kickante". This was the first research to study this platform, which is the largest platform in Latin America. Between 2014 and 2017, there were more than 70,000 campaigns, which managed more than US\$13 million in investments and donations. The platform has three main categories: (i) social causes, (ii) creative projects, and (iii) entrepreneurship,

and a large number of subcategories (Crowdfunding 2018). We have focused on a limited set of categories for parsimony.

The identification of the success factors of the projects in the Kickante platform contributes to the study of financial management by creating policies to attract resources more appropriate to the investor profile, in addition to contributing significantly to the academy. This paper seeks to identify the reasons why some projects obtain more funds than others.

The structure of this paper is as follows. In addition to this introductory section, there are three more sections. In Section 2 the literature is reviewed. In Section 3 empirical efforts are presented. This section identifies the variables influencing a lot of indicators of Kickante plans in Brazil (from the total amount per project to the value per investor or percentage of the primarily requested value). In Section 4 the conclusion is provided.

2. Literature Review

2.1. *The Literature on Crowdfunding—From Platform Models and Heterogeneous Rates of Success to the Risk of Fraud*

Zuquette (2015) understands crowdfunding as a process of raising financial resources from investors, donors or sponsors that aims to fund individuals or companies independently of the funder aiming to obtain the profit. This author develops this concept focused on startups. Crowdfunding is a means for obtaining capital to finance new projects or projects already in progress that require a significant volume of contributions. Most common cases are similar to the following case highlighted by Zuquette (2015). Gustavo, a Brazilian entrepreneur, invented a small device to freeze cans for domestic use. After several unsuccessful attempts to obtain financing from investors or banks, he discovered the collective financing platform and put his idea onto it, asking for a value that would cover the costs of development, production, and marketing. He then shared his financial needs on all his social networks, i.e., Facebook, Twitter, Google+, email, while not neglecting personal contact. Contributions started to appear and Gustavo received the necessary funding for the project (G1 2018).

So far, crowdfunding has been basically modeled as a two-period process: In the first stage of the crowdfunding process, investors/consumers order the products before the manufacturing/production process, and can benefit from purchasing the product at a low cost or ensure future gains from the success of the new product. In the second stage of the crowdfunding process, the product is already in the market and has already achieved certain success to the point of being marketed regularly. The main difference between these two stages is the price of the good, since the price of the good is certainly lower in the first stage when compared to the second (Hardy 2013).

In the study by Hardy (2013), the pay-what-you-want (PWYW) model may also be used, which can be observed in the Kickstarter platform. In this model, the consumer contributes with an amount, although the use of this model (PWYW) encourages more people to pay lower values. This bias varies according to the type of campaign, because differences arise when seeking to raise funds to finance charitable causes. Overall, crowding models are based on two types of campaigns: (i) those seeking donations to meet emerging needs, and (ii) those seeking investors to fund innovative products or processes.

The Kickante platform defines crowdfunding as the act of raising capital for initiatives that target the interests of the collectivity. Unlike other platforms, Kickante allows a wide variety of types of fundraisers, such as NGOs and artists, who look for donations (with or without reward), athletes looking for sponsorship and startups which need funds, to develop their own projects. Regarding rates of success, not all projects placed on a crowdfunding platform have good results. Considering well-known platforms, like Catarse and Kickstarter, the success rate is respectively 55% and 48.1%. According to Zhao et al. (2017), crowdfunding projects are successful (achieving the funding target) in less than 50% of cases. Thus, it is important that promoters understand the strongest forces of this emerging phenomenon.

People who provide resources for a crowdfunding project are not regular/mature investors or consumers. As such, participation in a crowdfunding is largely motivated by the feeling of participation in a social activity and by providing benefits to the community. Thus, crowdfunding contributors consider themselves part of a special group of investors or consumers who are providing benefits to the community (Araújo and Verschoore Filho 2017).

Crowdfunding takes several forms, such as the equity-based form (investors receive an ownership stake), the reward-based form (backers typically pre-order the product that is being developed), and the lending-based model (generates substantial global funding) and donation-based schemes (Belleflamme et al. 2013; Stanko and Henard 2017). According to these authors, equity and reward-based crowdfunding models have garnered the most interest with respect to their implications for innovation.

Holmberg (2016) classified the types of crowdfunding as:

- (i) Debt crowdfunding, which is a model of crowdfunding that has obtained the greatest volume of funding worldwide, with loans to finance projects
- (ii) Equity crowdfunding, which occurs when the sale of a shareholding occurs, and
- (iii) Reward and donation crowdfunding, which is based on distribution of rewards and donations. This type of crowdfunding also gets a large slice of the global crowdfunding market (Holmberg 2016).

According to Siqueira and Diniz (2017), equity crowdfunding is a modality in which sponsors can invest in companies in exchange for equity participation or profit sharing. The main risks associated with this type of investment are the entrepreneur's inability, fraud, and project risks. These risks are strengthened by the great asymmetry of information present in this type of investment, which can lead to market failures such as adverse selection, moral hazards, and collective action (Agrawal et al. 2011).

One aspect of additional value is the uncertainty regarding the fairness upon the collected money. For example, in Brazil, a certain campaign raised at least US\$1 million to save a little boy. However, his parents' spending raised suspicions and the money was blocked by the courts. The boy did, in fact, suffer from a serious and rare genetic disease. The controversy heated up after the boy's parents posted photos of a New Year's Eve trip to Fernando de Noronha, and of their new expensive car and cell phones (G1 2018). Some months later, the public prosecutor blocked all the money in the name of his parents under suspicion of the crime of appropriation of incomes of persons with disabilities (G1 2018).

In spite of some of these fraudulent examples throughout the world, there is nowadays a general interest in detailing the determinants of successful crowdfunding projects. There are three major reasons behind this interest. First, for the platforms' managers it is relevant to improve the low success rates of the projects. Second, crowdfunding platforms are stimulating digital markets and, therefore, more studies are needed for a better comprehension of the market forces operating there, namely supply of successful projects by promoters/entrepreneurs and demand of funds. Finally, given the rising trend of electronic businesses, crowdfunding's flows will also tend to rise.

Specific literature on the determinants of successful projects financed by crowdfunding platform is presented in the following sub-section.

2.2. Determinants of a Successful Crowdfunding Project

According to Allison et al. (2017), we do not know very much about why a person chooses to provide financial capital to a particular crowdfunding campaign. Depending on the context, the reasons that lead an individual or company to contribute to a cause or project may vary.

Mourão (2007) studied the motivations that lead people to contribute to a public campaign to support the fight against cancer. According to the author, there are other influences that lead people to donate, beyond economic growth, such as the fact that (Portuguese) older people tend to contribute less. Different situations in which a person or company is willing to make a contribution also influence the donated value.

Three dependent variables were detailed by [Mourão and Costa \(2015\)](#) when they analyzed determinants of crowdfunding projects observed for the Portuguese PPL Crowdfunding: the total value raised by the project, the value raised by the investor, and the target percentage. Independent variables considered in the model were: year, duration of application, number of supporters, type of promoters, population density of the municipality of the promoters, number of applicants, project validity, minimum invested with maximum reward, minimum invested with reward, and the number of targets for the collected money.

One variable highlighted in the study of [Stanko and Henard \(2017\)](#) as important for the success of crowdfunding campaigns is the number of crowdfunding backers and its relationship to the success of campaigns. This study was the first to investigate the effects of crowdfunding on subsequent innovation outcomes. The study pointed out that crowdfunding can be viewed as an open search, which actively seeks ideas from outsiders. Crowdfunding backers play an active function in the innovation conversation. Backers are the earliest adopters and are more valuable than traditional early adopters.

[Stanko and Henard \(2017\)](#) stated that the amount of raised funding during a crowdfunding campaign does not significantly impact the market performance of the product, whereas the number of backers attracted to the campaign does have an impact. The study also indicates that backers make an important contribution to knowledge creation through cooperation between backers and crowdfunding promoters.

The study of [Allison et al. \(2017\)](#) relied on narratives of 383 crowdfunding entrepreneurs who promoted a campaign. The authors aimed to create a model for the analysis of persuasion in crowdfunding campaigns. Entrepreneurship education was considered by the study important in giving the funders the ability and motivation to make careful evaluations. On the other hand, cues, such as adopting a group identity, strongly influence inexperienced funders who participate in campaigns for the first time.

[Hardy \(2013\)](#) intended to capture the underlying mechanisms of crowdfunding schemes. The study indicated the advantages of crowdfunding platforms over traditional methods of sale. The advantages of crowdfunding are directed both to the producer and to the consumer. The producer may verify if the idea is a good one before investing money in the new project. If there is no answer from the crowd, there will be a great risk of the project failing and the project manager will not benefit from anything. The consumer has a direct influence on the project's outcome. Two kinds of agents are therefore considered by [Hardy \(2013\)](#): The producer or the project manager, who is the person who introduces a new project to the community with the intention of carrying it out if sufficient funds are gathered, and the contributor, who wants a compensation for the contribution. Sometimes an individual may represent both roles in respect to different projects.

Four types of incentives offered to contributors are presented by [Hardy \(2013\)](#):

- *General incentive to pay.* Henceforth called the general value perceived by all contributors and non-contributors.
- *Individual incentive to pay.* The contributor pays a certain amount of money to acquire the base product.
- *Incentive to participate.* A reward to the contributor for taking part in the project, for example, a "thank you" in the credits.
- *Other incentives.* Incentives not necessarily directly linked to collecting money, for example, the producer increases the value of the product if a certain number of people "like" the Facebook page of the project. This can influence the producer's popularity and encourage new contributors, without increasing the funds in any direct way.

[Mourão and Costa \(2015\)](#) particularly studied two variables related to incentives to evaluate the success of campaigns: minimum value invested with maximum reward and minimum value invested with minimum reward. For example, a campaign promoted by a chamber music quartet from São Caetano do Sul to record a CD offered as a minimum reward the CD itself for those who donated US\$2, and as a maximum reward, an exclusive concert for those who donated US\$335. [Mourão and Costa \(2015\)](#) concluded that incentives are essential to the success of a crowdfunding campaign.

According to [Hardy \(2013\)](#), there are three degrees of price discrimination. In the first degree, the seller defines a maximum price for which the buyer will be willing to buy the product. In the second degree the buyer receives discounts for acquiring a larger quantity of a product, and, at last in third degree discrimination the seller charges different prices to different groups of people, according to their characteristics, such as region, status, etc. that could be correlated with the consumers' willingness to pay.

Second degree discrimination is mostly used by Kickstarter. The platform offers larger quantities and/or bonuses to people who contribute more to the project. If the contributor has a higher willingness to pay, Kickstarter introduces incentives to offer higher prices. A contributor will increase his donations as long as he realizes that the benefits rise more quickly than the costs.

This review of the literature leads therefore to conclude that studies related to the success of crowdfunding projects can be divided into three areas. First, performance of crowdfunding is affected by entrepreneurs' social network ties. Second, the characteristics of successful crowdfunding campaigns are not randomly distributed. Considering these characteristics, nonprofit projects tend to be more well succeeded projects and require relatively less capital. Third, the motivation behind backers' participation in crowdfunding is important. Backers who have similar interests to the entrepreneurs are more likely to participate ([Zhao et al. 2017](#)).

3. Empirical Studies

As seen in the previous section, the current literature divides the set of crowdfunding determinants by the density or size of the promoters' network, the promised rewards for the funding, and the characteristics of the promoted projects, such as the demanded amount of money, the type of promoters and the type of project. This section will test these determinants for the largest Latin American crowdfunding platform—the Brazilian Kickante.

3.1. The Kickante Platform

In Brazil (and even in Latin America), Kickante is the largest crowdfunding platform. Between 2013 and 2018, more than 72,000 campaigns have been launched, generating more than US\$15 million ([Kickante 2018](#)). Other Brazilian platforms also stand out, such as Cartase, Kickstarter, Indiegogo, StartMeUp, Broota, Impulso, Idea.me, and Bicharia.

Kickante has adopted a reward and donation crowdfunding model, suggesting that the success of the Brazilian platform is due to the social characteristics faced by Brazil, as well as philanthropic aspects. This differs from Kickstarter, which is based in the United States, and is based on debt crowdfunding and equity crowdfunding.

One factor that may explain the success of Kickante is its multiple modes of campaigns. In addition to the traditional All-or-Nothing, or to flexible campaigns (like "keep it all" in Kickstarter), Kickante has created the Kick Outreach campaign mode. In the all-or-nothing mode, the proponent only receives the amount that was donated, if s/he reaches or exceeds the stipulated target, while in the flexible campaign, the proponent receives the value at the end of the independent campaign regardless of the campaign's success. In Kick Solidário, the donor who engages in the "Events of the Good" option determines the value of one of the 300 NGOs previously registered in the platform. Examples of "Events of the Good" include soccer matches, marriages, birth celebrations, and birthdays ([Kickante 2018](#)).

Based on the campaigns since 2013, Kickante has developed a preliminary analysis between the goals set by the proponent and the success of the campaigns. The analyses indicate that a direct and positive relationship exists between the goal and the necessary campaign time, and time spent in the campaign on social networks ([Kickante 2018](#)), such as, Facebook, Whatsapp, Twitter, and Instagram, among others. In other words, the following conclusions are indicated:

- The higher the goal, the more time spent on the campaign;
- The higher the goal, the greater the need for investments in social networks, in order to establish or increase trust.

Other observations by platform managers indicate:

- (i) The need for planning before the campaign is published, using donors (who actually contribute financially to the campaign) and supporters (those who do not contribute financially but advertise on their social networks) and
- (ii) An understanding of a hierarchy based on proximity to the proposer and the trust assigned to the campaign.

Kickante's managers have assigned the name Network 1 to those closest to the campaign leader, such as family, friends, and fans. Network 2 basically consists of friends of friends and acquaintances, and Network 3, is the general public. For Kickante the first to contribute to the campaign will be members of Network 1, because there is already a solid level of trust, while the people in Network 3 will need to build this relationship.

Other relevant aspects suggested by the platform are the use of media, the number of people involved in the campaign and the rewards. Media, such as videos, for example, prove that the proponent is real, making it more reliable. Regarding the formation of a group, analyses carried out by the developers of the platform affirm that teams can raise 80% more than a single person (Kickante 2018). Finally, intangible rewards are suggested as influential.

Table 1 shows some descriptive values relating to successful projects managed by the Kickante platform.

Table 1. Descriptive values for successful Kickante projects (2013–2017).

Category/Subcategory	Number of Investors	Collected Amount (Reais, 1 USD = 3.82 Reais)	% of the Total Collected Amount	Mean Number of Investors	Minimum Value with Maximum Prize (Mean, Reais)	Minimum Value with Prize (Mean, Reais)
Social Projects/Causes	344	8,412,759.70	52%	225.25	2029.19	32.24
NGO	88	3,067,566.31	19%	338.20	2768.85	81.45
Education	79	1,706,613.34	11%	135.71	3071.42	15.95
Health	42	1,013,894.71	6%	197.94	1032.96	10.00
Pets/Animal life	49	794,849.84	5%	366.29	4255.36	27.14
Environment	14	697,195.16	4%	100.68	904.05	18.07
Community	41	523,768.15	3%	214.16	672.37	22.37
Activism	19	306,833.53	2%	107.22	681.11	23.89
Beliefs/Religion	9	153,724.01	1%	4856.00	20.00	20.00
LGBT	1	107,213.39	1%	517.00	2750.00	10.00
Refugees	1	40,471.26	0%	14.00	0.00	0.00
Wellbeing and gym	1	630.00	0%	181.62	1019.29	9.05
Cultural projects/Creative	363	6,408,689.88	40%	180.47	5451.11	26.76
Music	138	2,316,341.73	14%	191.97	10749.05	17.76
Books	98	1,771,772.68	11%	198.23	2810.14	27.52
Games	25	1,209,323.68	7%	297.04	1412.03	29.35
Cinema	35	269,240.99	2%	73.80	2512.29	17.34
Photography	16	243,602.40	2%	131.44	2247.50	48.56
Theater	19	240,577.40	1%	71.68	1702.63	84.21
Media	11	131,160.00	1%	144.27	511.82	24.09
Design	5	75,277.00	0%	50.00	925.80	10.00
Cartoons	5	55,671.00	0%	90.20	1022.00	15.00
Video	5	55,392.00	0%	707.00	802.00	12.00
Humour	2	27,335.00	0%	72.50	1750.00	5.00
Dance	3	11,981.00	0%	45.67	1856.67	130.00
Fashion	1	1015.00	0%	11.00	0.00	0.00
Entrepreneurship	81	1,361,638.67	8%	123.27	2143.09	23.90
Innovation	9	377,544.50	2%	156.67	7444.67	21.89
Sports	38	313,191.17	2%	76.74	1075.84	24.71
Tech	9	178,669.99	1%	186.00	1361.11	27.11
Events	15	163,003.00	1%	116.27	883.47	23.80
Gastronomy	5	161,956.67	1%	346.80	7024.80	27.80
Start up	3	135,803.34	1%	26.33	1326.67	13.33
Small Businesses	2	31,470.00	0%	214.00	550.00	10.00
Total	788	16,183,088.25		194.14	3617.24	28.86

Source: (Kickante 2018).

3.2. Data, Descriptive Statistics and Results

For analyzing the determinants explaining the well-succeeded projects exhibited in the Brazilian site 'Kickante.com' we are going to estimate the following model (Equation (1)):

$$y_i = \alpha + \beta^* X_i + e_i \quad (1)$$

The previous Equation (1) will alternatively assume three dependent variables. These dependent variables are the total raised value per project, the percentage of target, and the raised value per investor. The independent variables follow the literature review. Therefore, we used variables that focused on the project's characteristics (Poetz and Schreier 2012), the number of investors (Schenk and Guittard 2009) and the rewards available to the investors (Kappel 2008).

The independent variables are the number of investors ("kickantes"); the type of projects (social projects/causes, cultural/creative projects, entrepreneurship); the type of promoters (individuals, groups of individuals, NGOs, firms/companies); the existence of multiple aims attributed to the raised money; the minimum invested value with reward; and the minimum invested value with the maximum reward.

We considered it important to exhibit some comments about the main descriptive statistics of these variables (Table 2). Following Silveira et al. (2018), we also observed that the median project promoted by the Kickante platform received US\$5375, being excessively funded 49% above the required value, and each one of the 194 investors gave around US\$45 to this representative project. It was most likely funded in 2015 and promoted by an individual. This representative project did not involve the repairing of buildings. The minimum invested value that granted a reward to the investor was around US\$7 and the minimum invested value that granted the maximum reward to the investor had a median value of US\$950.

Table 2. Descriptive statistics.

	Number of Cases	Mean	Standard Deviation	Minimum	Maximum
Total raised value per project (dollar)	788	5376.15	2732.75	95.29	232,823.40
Excess over target (=Funded Value/Required Value)	788	1.498	2.246	0.360	53.562
Raised value per investor (dollar)	788	44.23	138.58	1491.10	2698.19
Year	788	2015.7	0.931	2013	2017
Number of investors	788	194.13	413.18	1	4856
Type of promoters *	788	1.793	1.078	1	4
Type of projects **	788	2.826	1.740	1	6
Multiple functions	788	1.302	0.707	1	5
Validity of the project (1, yes; 0, no)	788	0.876	0.328	0	1
Minimum invested value with prize (dollar)	788	7554.45	48.16	-	1308.90
Minimum invested value with the maximum prize (dollar)	788	946.92	9505.07	-	61,780.10
Municipality (discrete vv)	788	104.019	39.129	1	154
Project focused on construction/repair of buildings	788	0.048	0.214	0	1
Comments on the project's Kickante page	582	46.577	98.644	0	893

* Type of promoters: 1, a single promoter; 2, an informal group of promoters; 3, a non-profit organization; 4, a private company/firm. ** Type of projects—1: Social; 2: Creative/Cultural; 3: Entrepreneurship. Source: (Kickante 2018).

For studying the eventuality of problems of endogeneity, we also ran the Durbin-Hu-Hausman tests against the endogeneity of the variables most likely to introduce problems; as an ultimate observation, we were able to reject the hypotheses of exogenous regressors. Full details are available upon request. Therefore, OLS is not appropriate and we preferred to estimate our regressions using two stage least squares (Wooldridge 2007). These results, estimated by two stage least squares (2SLS) with heteroscedasticity robust standard errors, are in Table 3.

Table 3. Estimations for total funded value, percentage of target, and value per investor (2013–2017).

	Total Raised Value per Project	Percentage of Target	Raised Value per Investor
Constant	3480.8 (4976.5)	1.44 *** (0.12)	165.3 *** (45.01)
Project focused on construction/repair of buildings	1283.0 (10221.1)	−0.13 (0.18)	−111.3 (69.5)
Number of investors	110.4 *** (24.0)	0.0008 ** (0.0004)	−0.093 ** (0.043)
Type of promoters	2: −3273.7 (2537.7)	2: −0.19 (0.16)	2: 37.8 (37.4)
	3: −4181.2 (5780.3)	3: −0.24 * (0.13)	3: 193.7 * (102.1)
	4: 7891.7 * (4556.6)	4: 0.46 (0.43)	4: 209.3 * (117.0)
Type of projects	2: −5010.8 (3917.7)	2: −0.056 (0.183)	2: −29.6 (23.3)
	3: 1203.2 (3351.4)	3: −0.10 (0.12)	3: 161.6 * (86.5)
Multiple functions/ends for the invested money	−1361.2 (2279.8)	−0.08 * (0.05)	−21.7 (23.6)
Minimum invested value with prize	3.16 *** (1.14)	−0.00008 * (0.00001)	0.040 *** (0.014)
Minimum invested value with the maximum prize	0.067 (0.089)	−0.000001 (0.0000008)	0.0001 (0.0008)
R2/Number of cases	0.485/704	0.015/704	0.033/704
Wald chi2	56.05	16.36	66.38
F-val (1st stage regression)	16.10 *	16.10 *	16.10 *

Note: Robust heteroskedasticity standard errors between parentheses. Significance levels: *, 10%; **, 5%; ***, 1%. Instruments: i.municipality, population density of the surrounding region, number of comments. Source: (Kickante 2018).

Results from Table 3 show that the total raised value per project rises with the number of investors (“kickantes”) and with the minimum value guaranteeing a reward in each project. The type of promoters—especially firms or companies, influence the raised value per project. The overall R2 is highly satisfactory for the first exhibited regression (0.49) and the F-val from the first stage regression is statistically significant at a level of 10%. This considers the critical values for the 2SLS relative bias, which favors the actual option for the chosen instruments. The test on endogeneity does not allow rejection of the null hypothesis for variables that are exogenous.

Regarding the other columns (i.e., related to the achieved target and to the value per investor), additional evidence arises. First, the target increases with the number of investors. Second, NGOs and firms also increase the expected value per investor as well as projects classified in the entrepreneurship category. Finally, the value per investor also tends to increase if the minimum value with a reward is higher.

Tables 4–6 exhibit the estimates for the three different groups of projects: social/causes (Table 4), cultural and creative projects (Table 5), and entrepreneurship (Table 6).

Table 4. Type of Project: Social/Causes. Estimations for total funded value, percentage of target, and value per investor (2013–2017).

8	Total Raised Value per Project	Percentage of Target	Raised Value per Investor
Constant	−261.1 (4369.1)	1.39 *** (0.14)	186.9 *** (62.6)
Project focused on construction/repair of buildings	9917.9 (8424.3)	−0.084 (0.188)	−134.2 (89.7)
Number of investors	74.6 *** (23.10)	0.0002 (0.0002)	−0.105 ** (0.052)
Type of promoters	2: 682.5 (1783.64)	2: −0.212 * (0.212)	2: 17.04 (24.82)
	3: −632.5 (2608.3)	3: −0.109 (0.112)	3: 196.2 * (117.7)
	4: −18,105 ** (9025.0)	4: 1.23 (1.33)	4: −45.4 (37.6)
Multiple functions/ends for the invested money	−39.46 (2010.6)	−0.035 (0.062)	−35.4 (36.0)
Minimum invested value with prize	−0.84 (0.97)	−0.00007 ** (0.00003)	0.004 *** (0.001)
Minimum invested value with the maximum prize	3.802 *** (0.610)	0.00001 (0.000009)	0.004 *** (0.001)
R2/Number of cases	0.824/307	0.049/307	0.022/307
Wald chi2	599.17	13.51	52.50
F-val (1st stage regression)	25.99 ***	25.99 ***	25.99 ***

Note: Robust heteroskedasticity standard errors between parentheses. Significance levels: *, 10%; **, 5%; ***, 1%. Instruments: i.municipality, population density of the surrounding region, number of comments. Source: (Kickante 2018).

Table 5. Type of Project: Cultural/Creative Projects. Estimations for total funded value, percentage of target, and value per investor (2013–2017).

	Total Raised Value per Project	Percentage of Target	Raised Value per Investor
Constant	1009.0 (2742.7)	1.300 *** (0.255)	131.9 *** (93.19)
Project focused on construction/repair of buildings	No data	No data	No data
Number of investors	90.34 *** (17.64)	0.002 * (0.001)	−0.070 * (0.041)
	2: −2315.4 (2840.1)	2: −0.399 (0.321)	2: 38.44 (33.82)
Type of promoters	3: −10,969.1 (21934.6)	3: −1.024 (0.757)	3: 129.8 * (76.33)
	4: 3887.2 (3140.4)	4: 0.162 (0.596)	4: 0.613 (15.43)
Multiple functions/ends for the invested money	−31.97 (1950.1)	−0.172 * (0.101)	−4.96 (16.29)
Minimum invested value with prize	16.17 (15.23)	−0.0004 (0.003)	0.022 (0.194)
Minimum invested value with the maximum prize	0.002 (0.015)	−0.000002 * (0.000001)	−0.000005 (0.00003)
R2/Number of cases	0.255/323	0.032/323	0.038/323
Wald chi2	425.7	6.52	0.50
F-val (1st stage regression)	10.61 **	10.61 **	10.61 **

Note: Robust heteroskedasticity standard errors between parentheses. Significance levels: *, 10%; **, 5%; ***, 1%. Instruments: i.municipality, population density of the surrounding region, number of comments. Source: (Kickante 2018).

Table 6. Type of Project: Entrepreneurship. Estimations for total funded value, percentage of target, and value per investor (2013–2017).

	Total Raised Value per Project	Percentage of Target	Raised Value per Investor
Constant	−7006.2 (4606.7)	1.24 *** (0.12)	204.3 * (110.8)
Project focused on construction/repair of buildings	−7263.2 (6803.2)	−0.15 (0.223)	−189.5 (248.1)
Number of investors	108.5 *** (26.94)	−0.0003 (0.0003)	−1.049 (0.706)
	2: 2984.0 (4978.8)	2: 0.187 (0.175)	2: 118.9 (218.7)
Type of promoters	3: 410.4 (1891.9)	3: −0.15 * (0.084)	3: −72.84 * (43.86)
	4: 39,393.6 ** (16221.6)	4: 0.792 * (0.475)	4: 1108.5 ** (472.2)
Multiple functions/ends for the invested money	4566.6 ** (2203.7)	−0.084 ** (0.039)	2.74 (56.7)
Minimum invested value with prize	23.39 (28.87)	0.001 (0.002)	1.033 (1.079)
Minimum invested value with the maximum prize	0.637 (0.748)	0.00001 (0.00001)	0.043 ** (0.022)
R2/Number of cases	0.535/74	0.112/74	0.218/74
Wald chi2	74.93	37.51	27.25
F-val (1st stage regression)	9.89 *	9.89 *	9.89 *

Note: Robust heteroskedasticity standard errors between parentheses. Significance levels: *, 10%; **, 5%; ***, 1%. Instruments: i.municipality, population density of the surrounding region, number of comments. Source: (Kickante 2018).

If we interpret the most relevant estimates along these tables for the first column (total raised value per project), we observe the following. The most statistically significant effect from an additional investor relates to the projects focused on entrepreneurship as shown in Table 6. One additional investor for this investment category tends to add US\$28 to the project's funds; conversely, the least expressive effect is associated with the type of projects regarding social projects/causes (the estimated coefficient for the number of investors is 74.6).

Regarding the expectations of rewards, our estimations identified the projects regarding social projects/causes as those in which a higher minimum value with a maximum reward leads to higher amounts of money going to the project. Actually, if a project of this type increases the minimum invested with the maximum reward by one real, the total amount of the project can be expected to increase by US\$1. Therefore, in relation to the reward from the maximum prize, our estimates suggest that the social projects (Table 4) tend to be the most reactive. The dispersion of targets (proxied by the variable "multiple functions/ends for the invested money") seems to be more focused on the projects centered on entrepreneurship. There are also stimulating observations in regards to the type of promoters.

Firms and companies tend to be successful promoters for projects related to entrepreneurship. The percentage of target estimates is exhibited in the second column of each table. The low values of the R2 of these estimations suggest our set of independent variables are not able to explain the variance of the percentage of target achieved for each project by a significant proportion. Even so, for these estimations, the higher values granting a maximum reward tend to be associated to lower targets observed in the category of social/causes. Also, when diminishing the achieved percentage of target of these causes, we find the effect related to promoters like informal groups or NGOs. Once again, firms and companies increase the percentage of achieved target for projects related to entrepreneurship.

Regarding the raised value per investor (the third column in Tables 4–6), it is interesting to observe that investors in social causes or in entrepreneurship projects tend to invest more if there are more significant rewards or if they are not single individuals promoting the project.

Overall, the R2 is high for the estimations regarding total raised value per project, but it is low for the estimations regarding percentage of target and raised value per investor. This aligns with the study by [Mourão and Costa \(2015\)](#) and can be interpreted as evidence of the individual motivations behind each one of these investments, which further generate opportunities of research in order to explore other scientific explanations for explaining the values invested by each sponsor. The tests on endogeneity returned significant values, which prove the exogeneity of the instruments. The F-values for the first stage regressions led us to conclude the quality of the chosen instruments.

We have also estimated the effect from the different states of Brazil for the estimation of the total raised value per project considering all the projects. The following table (Table 7) shows this.

Table 7. Fixed-effects for Brazilian states (dependent variable: Total raised value per project).

State	Estimated Effect
Amapá	−14,220.07 **
Amazonas	−1900.08
Bahia	−9876.35 **
Ceará	667.21
DF Brasília	−170.39
Espírito Santo	−5799.04 **
Goiás	−15,330.03 **
Maranhão	−7718.81 **
Mato Grosso	−4363.92
Minas Gerais	−1004.13
Paraná	−571.44
Paraíba	−5225.79
Pará	−4830.39 *
Pernambuco	−849.18
Piauí	−13,359.82
Rio Grande do Sul	−4881.53 *
Rio de Janeiro	−6755.19
Roraima	−9196.84 **
Santa Catarina	−16,893.15
Sergipe	−7722.72 *
São Paulo	−6014.33

Significance levels: *, 10%; **, 5%

Overall, projects from states like Espírito Santo, Maranhão, Roraima, and Sergipe tend to have smaller raised values. There are several studies highlighting the importance of the surrounding area for increasing the amounts of investments raised ([Hess 2018](#); [Aliprantis and Carroll 2018](#); [Pattillo 2008](#)) or of charitable flows ([Clifford 2017](#); [Ishida and Okuyama 2015](#)) to targets located in certain places. According to the [Atlas of Human Development \(2018\)](#), these states tend to be characterized by low values on the Human Development Index when considering all Brazilian states.

4. Discussion

This work has studied the determinants that explain the heterogeneity of values regarding the crowdfunding projects observed in the Brazilian platform Kickante. In addition to the size of Kickante's dimensions (the largest Latin American crowdfunding platform), we considered it relevant to research the determinants of the raised amounts per project because of two major reasons.

[Hauge and Chimahusky \(2016\)](#) analyzed alternative characteristics regarding crowdfunding projects. They studied a representative sample of 288 cases from the total number of 23,353 projects posted on the platform Kickstarter. Some of the analyzed characteristics were project goals, number

of backers for a given project, preparedness of the project, number of members on a project team, connection to a Facebook page, and reward levels from the project. They concluded in their sample that 61.46% of the projects that guarantee a reward tend to be funded.

According to [Cho and Kim \(2017\)](#), the number of comments and updates had positive effects on the success of crowdfunding projects in US. The authors analyzed cultural dimensions on North America's and South Korea's crowdfunding sites, observing 260 projects from North American sites and 250 projects from South Korean platforms. Results showed that in the US more comments from people and updates on the project's progress increase the probability that people will support a given project. The study also concluded that the success of crowdfunding in Korea is influenced specifically by the number of supporters.

According to [Zhao et al. \(2017\)](#), commitment has a remarkable and positive effect on funding intentions. According to [Borst et al. \(2018\)](#), crowdfunding projects are predominantly supported by the project creator's relatively small network of family and friends. They argue that mobilizing funders outside this close network positively contributes to the success of a crowdfunding project.

[Zuquette \(2015\)](#) studied variables that are traditionally considered to be positively correlated with the success of crowdfunding campaigns, such as the dimension of the network of the entrepreneur, the media quality of the project, the external highlights, the generosity of the entrepreneur's primary groups, the level of the requested fund, the project's duration, and the comments about the project on social networks.

Regarding the two major motivations behind this study, we have to comment on the following. The first motivation regarded the search for a better achievement of the low rates of success, which still characterize the exposed projects in crowdfunding platforms. Therefore, if all managers of these platforms can be informed about the most important dimensions enhancing the success of the exhibited projects, there would be a substantial increase in the perceived relevance of these emerging tools for entrepreneurship, for social causes and for the promotion of artistic projects. The second motivation related to the interest of each project's promoter. If s/he knows which dimensions maximize the value allocated to the project or the achieved percentage of target, then s/he will be able to search for a better example of such dimensions.

There are two major limitations in this version. The first relates to the sample in this study. Although we have observed all the data of the platform Kickante, it is important to compare these results with alternative data from other platforms in Brazil and to obtain global results. The second relates to the focus of this version in the three major categories. We are aware that regressions considering the subcategories will provide additional and stimulating insights.

5. Conclusions

Based on the literature review of this emerging field, and considering two stage least square regressions, our major results identify the role of the number of investors/kickantes for a project as successful indicators. Therefore, as indicated by our title, "many" friends, supporters, or investors of a project's promoter will never be "too many" for the development and funding of the project. Other dimensions, which have also been pointed to as important, relate to the minimum invested with rewards and to the different types of promoters (individuals, informal groups of citizens, NGOs, and firms/companies). Therefore, all of those who are interested in the success of a project exhibited in a crowdfunding platform must reflect on the best person/s to promote it as well as to use convenient rewards for a minimum investment in order to maximize the chances of funding.

This promising study has various potential for further research. Presently, we consider the following three as priorities: Firstly, we are interested in collecting more data from other Brazilian and Latin American platforms to contribute to a more robust observation of this emerging phenomenon. Secondly, we consider it relevant to explore the dimensions of the social network of each promoter as well as her/his individual characteristics. Finally, given the significance of the place/state in which

each project identifies as its home place, we want to explore spatial interlinkages/autocorrelations of this feature in future research.

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References

- Agrawal, Ajay, Christian Catalini, and Avi Goldfarb. 2011. Family, Friends, and the Flat World: The Geography of Crowdfunding. *SSRN Electronic Journal* 10: 1–62.
- Aliprantis, Dionissi, and Daniel Carroll. 2018. Neighborhood dynamics and the distribution of opportunity. *Quantitative Economics* 9: 247–303. [CrossRef]
- Allison, Thomas H., Blakley C. Davis, Justin W. Webb, and Jeremy C. Short. 2017. Persuasion in crowdfunding: An elaboration likelihood model of crowdfunding performance. *Journal of Business Venturing* 32: 707–25. [CrossRef]
- Araújo, Mariana D. M., and Jorge R. S. Verschoore Filho. 2017. O Impacto das Estratégias de Recompensas no Resultado de Projetos de Crowdfunding: Uma Análise Comparativa Qualitativa com Utilização de Conjuntos Fuzzy. Paper presented at Encontro Nacional da Associação Nacional de Pós-Graduação e Pesquisa em Administração, São Paulo, Brazil, May 28–30.
- Atlas of Human Development. 2018. Various Indicators. Available online: <http://www.atlasbrasil.org.br/2013/en/> (accessed on 2 April 2018).
- Belleflamme, Paul, Thomas Lambert, and Armin Schwienbacher. 2013. Individual crowdfunding practices. *SSRN Electronic Journal* 15: 313–33.
- Borst, Irma, Christine Moser, and Julie Ferguson. 2018. From friend funding to crowdfunding: Relevance of relationships, social media, and platform activities to crowdfunding performance. *New Media & Society* 20: 1396–414.
- Cho, Moonhee, and Gawon Kim. 2017. A Cross-cultural Comparative Analysis of Crowdfunding Projects in The United States and South Korea. *Computers in Human Behavior* 72: 312–20. [CrossRef]
- Clifford, David. 2017. Neighborhood Context and Enduring Differences in the Density of Charitable Organizations: Reinforcing Dynamics of Foundation and Dissolution. *American Journal of Sociology* 123: 1535–600. [CrossRef]
- Crowdfunding. 2018. Available online: <https://www.crowdfundingnobrasil.com.br/> (accessed on 2 April 2018).
- G1. 2018. Campanha Para Ajudar Menino Levanta Suspeita após Gastos dos Pais. Available online: <https://www.g1.com.br> (accessed on 2 April 2018).
- Hardy, Wojciech. 2013. How to Perfectly Discriminate in a Crowd? A Theoretical Model of Crowdfunding. Working Papers 16/2013 (101). Warszawa, Poland: University of Warsaw, Faculty of Economic Sciences.
- Hauge, Janice A., and Stanley Chimahusky. 2016. Are promises meaningless in an uncertain crowdfunding environment? *Economic Inquiry* 54: 1621–30. [CrossRef]
- Hess, Chris. 2018. Light-Rail Investment in Seattle: Gentrification Pressures and Trends in Neighborhood Ethnoracial Composition. *Urban Affairs Review*. [CrossRef]
- Holmberg, Johan. 2016. Crowdfunding and Economic Growth: Potential Effects on Investment Efficiency. Bachelor's Thesis, Civilekonom programmet Holmberg, Umea Universitet, Umea, Sweden; pp. 1–34.
- Ishida, Yu, and Naoko Okuyama. 2015. Local Charitable Giving and Civil Society Organizations in Japan. *Voluntas. Online First* 26: 1164–88. [CrossRef]
- Kappel, Tim. 2008. Ex Ante Crowdfunding and the Recording Industry: A Model for the US. *Loyola of Los Angeles Entertainment Law Review* 29: 375.

- Kickante. 2018. Various Data. Available online: <https://www.kickante.com.br> (accessed on 2 April 2018).
- Mourão, Paulo. 2007. Portuguese public collections and the economic cycle: A seminal study. *International Journal of Social Economics* 34: 961–76. [CrossRef]
- Mourão, Paulo, and Catarina Costa. 2015. Investors or Givers? The Case of a Portuguese Crowdfunding Site. In *Distributed Computing & Artificial Intelligence, 12th International Conference. Advances in Intelligent Systems and Computing*. Edited by Sigeru Omatu, Qutaibah M. Malluhi, Sara Rodríguez Gonzalez, Grzegorz Bocewicz, Edgardo Bucciarelli, Gianfranco Giulioni and Farkhund Iqba. Cham: Springer, vol. 373.
- Pattillo, Mary. 2008. Investing in poor black neighborhoods 'as is'. In *Public Housing Transformation: Confronting the Legacy of Segregation and the Legacy of Segregation*. Edited by Susan J. Popkin, Lynette Rawlings and Margery Austin Turner. Washington, DC: Urban Institute Press, pp. 31–46.
- Poetz, Marion, and Martin Schreier. 2012. The value of crowdsourcing: Can users really compete with professionals in generating new product ideas? *Journal of Product Innovation Management* 29: 245–56. [CrossRef]
- Silveira, Marco A. P., Rodrigo S. Melo, and Paulo Mourão. 2018. Determinants of the Well-Succeeded Crowdfunding Projects in Brazil: A Study of the Platform Kickante. In *Innovation, Engineering and Entrepreneurship*. London: Springer, pp. 856–862.
- Schenk, Eric, and Claude Guittard. 2009. What can be crowdsourced to the crowd and why? Paper presented at Workshop on Open Source Innovation, Strasbourg, France, December 7.
- Siqueira, Érica S., and Eduardo H. Diniz. 2017. Equity crowdfunding no Brasil: Características dessa modalidade de investimentos, novos aspectos regulatórios e o perfil do investidor. Paper presented at Seminars of Universidade de São Paulo, São Paulo, Brazil, November 19.
- Stanko, Michael A., and David H. Henard. 2017. Toward a better understanding of crowdfunding, openness and the consequences for innovation. *Research Policy* 46: 784–98. [CrossRef]
- Wooldridge, Jeffrey M. 2007. *Econometrics*. São Paulo: Thomson Learning.
- Zhao, Qun, Chun-Der Chen, Jin-Long Wang, and Pin-Chung Chen. 2017. Determinants of backers' funding intention in crowdfunding: Social exchange theory and regulatory focus. *Telematics and Informatics* 34: 370–84. [CrossRef]
- Zuquette, Rovian D. 2015. Redes ego Centradas e os Projetos de Crowdfunding: Uma Relação entre as Características Estruturais da rede Social do Empreendedor e o Sucesso de Projetos de Financiamento Coletivo no Brasil. Master's Thesis, University of Vale do Rio dos Sinos, São Leopoldo, Brazil.



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