



Signaling and success in campaigns of Latin-American crowdfunding

Señalización y el éxito de las campañas de *crowdfunding* latinoamericano

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Abstract

Funding opportunities for entrepreneurship in Latin America are few, commonly being limited to the use of traditional platforms such as public and private banking, or even informal forms of recollecting resources, none of this particularly fitted to support early stage entrepreneurship. Because of this, new collection mechanisms have emerged, such as reward-based crowdfunding. However, this mechanism presents large percentages of failure and diminished growth rates compared to other regions. This empirical research aims to contribute to the understanding of the factors that make a successful campaign from the perspective of signaling theory. Based on the information collected from 21 804 Latin American campaigns, extracted from eight different countries, and from the Catarse, Kickstarter and Idea.me platforms, the results indicate that the use of social networks, number of rewards, multimedia material such as images, videos and gifs, as well as efforts of communication with clients during or after the funding phase, have a positive influence in the success of a campaign. Furthermore, all of these are seldom used by the majority of the evaluated campaigns, independent of their country of origin or the nature of the campaign itself. The lessened growth of crowdfunding on the region is understood, and it is partly affected due to the inherent quality of the projects, where there is a lot of room for improvements to be made.

Resumen

Las oportunidades de financiamiento para emprendimientos en Latinoamérica son pocas, limitándose comúnmente al uso de instituciones tradicional como la banca pública y privada, o incluso a recursos recaudados informalmente, ninguno de estos particularmente estructurado para emprendimientos de etapa temprana. A esto, han surgido nuevos mecanismos de recaudación como el *crowdfunding* basado en recompensa. Sin embargo, este sufre en Latinoamérica de grandes porcentajes de fracaso y un crecimiento general desacelerado en comparación a otras regiones. Esta investigación empírica, pretende contribuir al entendimiento de los factores que hacen a una campaña exitosa desde la perspectiva de la teoría de señalización. Basado en la información recaudada de 21 804 campañas de origen latinoamericano, extraídas de ocho países distintos, de las plataformas Catarse, Kickstarter e Idea.me; Los resultados indican que el uso de redes sociales, número de recompensas, material multimedia incluyendo imágenes, videos y gifs, así como esfuerzos para comunicarse con el cliente sea durante o después de culminado el plazo de recaudación, influyen positivamente al éxito de una campaña. Se determina también un uso marginal de todas estas señales, independientemente del país de origen de las campañas o su naturaleza. El mermado crecimiento de la escena de *crowdfunding* en la región se entiende, está siquiera en parte afectada por la calidad inherente de los proyectos, donde hay mucho espacio por mejorar en referencia a las señales usadas.

Keywords | palabras clave

Crowdfunding, reward, signaling, data extraction, e-commerce, asymmetries, funding, entrepreneurship.

Crowdfunding, recompensa, señalización, extracción de datos, comercio en línea, asimetrías, financiamiento, emprendimiento.

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1. Introduction

In any developing economy, the promotion of private investment is a priority that is difficult to implement due to several factors. One of the main difficulties is the fact of incentivizing the willingness to finance by traditional financial institutions, which represents a very cautious financing alternative, leaving without opportunities higher risk investments, such as early-stage entrepreneurs.

In response to these difficulties, instruments that allow the financing of higher risk investments have emerged in recent years, some of these based on the internet as their platform. This is the case of crowdfunding, which is an effort to democratize the financing power of the common person and distribute the risk to a greater number of investors.

The interest in this research lies in the potential that crowdfunding can have in the Latin American entrepreneurship, and which developed slowly, especially in its lower-complexity models, such as reward-based crowdfunding that works similarly to a common e-commerce page, with the difference for the consumer of paying in advanced for the product and relying on just the prototype of the product.

The introduction of this new mass financing model requires understanding the factors that influence in making it a more attractive alternative to the investor, who in this case it would be the common consumer. In these efforts, the works that have been carried out, especially in more experienced markets such as the American one, has pointed to the study of quality signaling on web platforms and projects, as one of the mechanisms by which to promote this investment model.

Thus, this research strives to understand how well the platforms and projects of the main crowdfunding pages in Latin America are implementing basic signaling efforts, in order to determine how much of the difficulty in increasing the success rate of crowdfunding projects on these pages is simply due to the quality of the projects submitted and what is due to a general lack of online consumer culture of the region.

It is based on the assumption that the better the use of quality signaling by projects, the greater the chances of successfully raising the money ordered. This will be analyzed and answered within the research, through the collection of information from Latin American projects on three of the most used platforms in the area, and by using a search robot created for this purpose.

2. Literature review

A major challenge involved in creating any venture is the raising of initial capital to cement the start-up of a company. Traditionally, if there is no way to self-finance entrepreneurs use intermediaries (mainly commercial banks) in search of long-term loans (Berger & Udell, 1995); or even angel investment models and venture capital investments in certain cases. However, the former commonly has considerable aversion to financing these projects, due to the high risk involved, in addition to the amount of monthly interest payment, given by the financial volatility of these projects. The second is rare and may require a lot of investor interference in project decisions, creating a hole in significant financing opportunities (Kunz, Bretschneider,

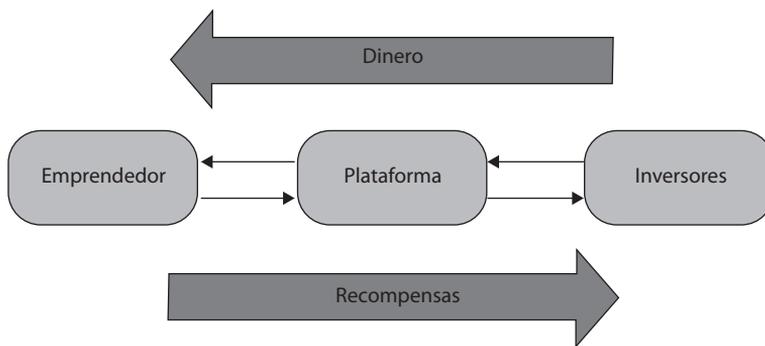
Erler & Leimeister, 2017), especially for the promotion of new projects (Mason & Harrison, 2004).

Additionally, fundraising is not the end of complications for an entrepreneurship. After finding some kind of financing, whether internal or external, the new business must start producing or developing a service on its own account or under the outsourcing of this function, to later try to sell it directly or under an intermediary. This traditional method is expensive and especially risky, given the strong assumptions that must be made about the real demand of the product (Chakraborty & Swinney, 2016), as well as the overall health of its cash flows in order to cover the debt or obligations of investors.

However, the increasing use of the internet as a friendly means to various types of economic and financial transactions (Dehling, 2013), has triggered in the creation of new forms of financing that welcome those weaknesses and sectors of demand neglected by traditional formats. These new financing models have resulted in rare connections between the entrepreneur and the investor, where the latter can take different forms, such as that of co-creator, consumer, sponsor, investor or simply lender (Davies & Giovannetti, 2018). What is consistent in all of them is the absence of a great intermediary, thus appealing to free access, in which accessibility and number of investors is stimulated (Dehling, 2013; Agrawal, Catalini & Goldfarb, 2013; Lambert & Schwiendbacher, 2010). The most important of these online mechanisms is called crowdfunding.

Crowdfunding is a relatively new financial model which democratizes the power of financing, i.e., it usually has free access to the ordinary citizen and it is defined as “the efforts of entrepreneurs and non-profit groups to finance their projects by attracting small contributions from large numbers of individuals through platforms on the internet” (Mollick, 2013, p. 2). Therefore, the dynamic by which crowdfunding works is composed of three actors (Figure 1): entrepreneurs, responsible for the project; the online platform as a vehicle for exposure and transaction; and investors, who may have several forms, depending on whether they are offered in return.

Figure 1. General crowdfunding model



Source: Davies and Giovannetti, 2018

This model is particularly useful for businesses and small businesses, since, being such small contributions of money, their investors experience little risk aversion, and their intermediaries are the platforms that manage the exchange of these funds, and these remain from commissions that commonly range from 3% to 8%, all operating online (Wells *et al.*, 2011).

There are specifically four models by which investors finance in crowdfunding (Agrawal *et al.*, 2012; Banco Mundial, 2013; Belleflamme, Lambert & Schwienbacher, 2013), where the difference lies in the way the investor is rewarded. This has great implications on how each of them works. These are: donation, the simplest of all since it does not include a greater reward in return, it is used for social causes, where it only emphasizes a sense of altruism in its participants; loans where the participant acts on a promise of payment to the person who finances and also appeals to a sense of altruism or individual interest of the participant; rewards, with a higher level of complexity, it is the financing in exchange for a specific product or service; and acquisition of shares, the most complex of all and that progressively takes on more traction (Massolution, 2015), comprising the acquisition of a portion of the company. Each of these has its own dynamics and theories that support the success or failure of a project.

The proposed study focuses specifically on the reward-based model, which functions as the promise of sale (pre-sale) of a product or service (Chakraborty & Swinney, 2016) that the entrepreneur wishes to produce in case the 'objective' financing to start such a business be fulfilled (Agrawal *et al.*, 2013), thus, solving the other difficulties about the risks of production and marketing prior to the confirmation of a real demand for the product, as mentioned before.

This model is chosen for the study, since this is the predominant, even more so in Latin America where more than three-quarters of visits to crowdfunding sites are to platforms of this type (Rentería, 2016); and it is also the model with more accessibility of information (Dehling, 2013; Banco Mundial, 2013). Thus, also the level of average complexity has allowed its introduction in Latin America, since it is very accessible to the public by behaving mostly as a common online commerce dynamic.

Crowdfunding has already gone from being a promising phenomenon to a consolidated and high-growth structure in all its forms. In 2015, 34.4 billion dollars were collected worldwide, with a growth of 270% and 200% in previous years (Massolution, 2015) and it is expected that by 2020 it will raise an estimated 90 billion dollars (Forbes, 2015). The phenomenon of crowdfunding platforms of all kinds has catapulted in recent years (Banco Mundial, 2013), primarily in the United States, after the introduction of regulations imposed for the freest application of all crowdfunding models in crowdfunding jobs act (Dehling, 2013). These new laws paved the way for the replication and expansion of this financing model by Europe, and more recently in some parts of Latin America.

Kickstarter, the main reward-based crowdfunding platform, has raised \$3.9 billion since its founding in 2008 through the conduction of 420,000 projects. Out of these projects, the ones that have had the most traction have collected between \$13 million and \$20 million. In addition to their numbers, these platforms have allowed the commercialization of new technologies such as watches, bookshelves and smart electrical connections, water repellent fabrics, new beekeeping formats and novel gadgets.

The crowdfunding scene in Latin America is generally incipient in relation to the progress on other continents. In 2014, a total of \$57.2 million was financed in Latin America, with an annual growth of 167%, a percentage that has been declining over the years, and with a level of growth close to that handled by the most advanced markets such as the American or the European with 140%. In fact, the market that looks significantly more promising is the Asian with an annual growth of 300% and a funding of 3.4 billion in 2014 (Massolution, 2015).

In total, the numbers are equally discouraging. Of all the funding raised by Crowdfunding worldwide in 2013, only 0.4% was generated in Latin America. This could be due to three different factors. It could first be caused by the lack of Latin American platforms, where in 2014 there were only 50 and very small growth; second it could be due to a lack of consumption culture of this kind in the region; or finally that the projects launched do not meet sufficient quality standards, which would be met with the lack of traction projects of Latin origin even on international platforms such as Kickstarter (Massolution, 2015).

Even if the growth of Latin American crowdfunding does not go hand in hand with other regions, volumes are still representative, and their growth rates are high compared to other financing alternatives. This is promising considering that this is a highly concentrated phenomenon in a few countries and therefore it has significant growth potential.

The Latin American crowdfunding scene such as its development has not even been in the different countries of the region. On the contrary, the activity is highly concentrated in Brazil, where in 2015, the percentage of daily visits to Brazilian platforms was 42.2% of the entire South American market (Rentería, 2016; Kickante, 2018). In addition, the countries with average activities are Argentina, Chile and Mexico, the latter despite not having a strong national platform (Nafin Mexico, 2017); and the rest of the Latin countries are still in the initiation process.

As far as platforms are concerned, it is not a surprise that these in turn are very concentrated and few conglomerates most of the visits. The main ones are Catarse, Idea.me, Vakinha, Prestadero, Panal de ideas and Broota (Rentería, 2016), of which they are all reward-based platforms with the exception of Broota, identifying a clear mode. Broota is the only prominent investment-based crowdfunding platform, which still suggests the lack of progress of the Latin market in legal and cultural terms in the face of this phenomenon.

Crowdfunding is a very atypical funding format, so it was originally of the main academic interest to understand the foundation that makes a successful crowdfunding campaign (successful is understood as those campaigns that collect 100% or more pre-defined funding target), and to know whether previous models that predicted traditional financing of early-stage projects were valid within crowdfunding dynamics (Mollick, 2013). The literature that explains the behaviors of the credit market, especially at an early stage, is characterized by information asymmetries. This is understood as forms of compromise in which there are high degrees of uncertainty about the reliability if the other party can fulfill the part of the deal (Connelly, Certo, Ireland & Reutzel, 2011; Spence, 1973). In the case of traditional financial offerings,

this is reflected in a strong aversion to venture financing for the lack of reliable information about the borrower or the project (Davies & Giovannetti, 2018).

The influence of information asymmetry on reward-based crowdfunding is no less, since it afflicts the transactions of this phenomenon by two different ways, first for this being a credit model and because it is very similar to a transaction in an electronic market; finally, by information asymmetries (Kunz *et al.*, 2017).

This is clearly the weakness of reward-based crowdfunding, as it comprises a transaction in which a lot of confidence is required, since the buyer/investor is not sure that the product or service he/she is purchasing is in fact the exactly offered, this insecurity is characteristic of online shopping since there are only limited ways to know if the product looks and works as it is being sold (Dehling, 2013; Kunz *et al.*, 2017; Kim, Buffart & Croidieu, 2016; Martens, Jennings, & Jennings, 2007). Additionally, the purchase in crowdfunding based on reward is not mostly immediate, as it would be in an online purchase, but the money would be delivered only under the promise that the product will be manufactured and sent, after a period of time, into the hands of the consumer. Therefore, this makes financing through reward-based crowdfunding different and complicated to materialize (Belleflamme *et al.*, 2012).

Due to these clear limitations, there are measures that can be taken into account to mitigate the limitations that information asymmetry imposes. These are represented under the theory of signaling (Mollick, 2013; Etter, Glossglauser & Thiran, 2013; Chakraborty & Swinney, 2016; Kunz *et al.*, 2017); which is explained as a set of 'signals' which are "attributes presented by an individual within a market, which, intentionally or not, alter beliefs and express information to other individuals in the market" (Spence, 1973, p. 263); i.e., these are sets of information that suggest the consumer the quality and reliability of the product or service (Cardon, Sudek, Mitteness, 2009). These are commonly used in e-commerce for the same purpose, and are materialized under the particular product presentation, page layouts and all the multimedia material that surrounds it, payment buttons and any other signals that suggest that the seller is reliable (Jiang & Benbasat, 2007).

In the particular case of reward-based crowdfunding, signaling works in a very similar way as it does in e-commerce. However, the difference is that crowdfunding platforms use common presentation formats in order to standardize and give all the tools to entrepreneurs to present their projects. Therefore, under this standard format of campaign presentation, examples of quality signals could be: the video that exposes the prototype (of the good or service), the number and forms of rewards understood as the portfolio of the campaign, the number of updates made to the page, the amount of feedback people leave and the response to such comments, traction generated on the network, etc. (Belleflamme, 2012; Mollick, 2013; Kunz *et al.*, 2017; Lynn, 1991; Nahapiet & Ghoshal, 1998).

3. Materials and method

For this research, the measurable attributes that make a Crowdfunding campaign have higher quality have been evaluated, based on the perspective of signaling theory. In addition, the aim is also to assess the existence or non-existence of signi-

ficant distinctions between the country of origin of these projects and their quality (performance in their use of signals), in order to understand whether signaling and the inherent quality of the projects have an effect on how crowdfunding unequally develops in the region.

In this way, a basic review of signals composed of the following (Table 1), has been stipulated, which in turn have been subdivided by their relative cost of implementation to see in what time of the campaign the signals are applied. The same presentation format used by Kunz *et al.* (2017) has been used, which in turn is based on a format used for signaling on e-commerce pages.

Table 1. Signals to use under Mavlova et al. format

	Before the beginning of the campaign	During the campaign
Low cost	Use of accounts in social networks (Facebook, Instagram and Twitter)	Number of comments
		Updates
High cost	Number of images	Staff picked
	Number of videos Own website	
	Number of rewards	

Source: Kunz *et al.*, 2017

For the research, relevant data of Latin campaigns: Catarse, Kickstarter and Idea.me were collected for the research, since these are three of the main platforms in most countries in the region. Only campaigns of American origin or with characteristics of what would be considered a reward-based Crowdfunding campaign have been leaked, i.e. donation campaigns and social causes have been ignored.

Once applied all these filters, there is a total of 21 804 projects, out of which 74.54% belong to the Catarse platform, i.e., 16 253 projects; second 13.22% for Kickstarter with 2882 projects; and finally, 12.24% for Idea.me with 2669 projects.

These webpages, because they do not have an API¹, require that the extraction of these amounts of data is carried out by means of a Web Crawler program.² These can be understood as “search programs capable of iterative and automatically download complete web pages, extracting their URLs and collecting information in detail” (Thelwall, 2001, p. 319). To this end, one has been developed for this purpose and the variables set out in Table 1 have been extracted, as well as complementary descriptive variables, in order to be able to present the information that includes campaign name, category, country of origin, target amount and amount raised.

In order to be able to see the relationship between the signals used by the projects and the success of the projects, i.e., if the campaign managed to raise the

¹ Company-specific interfaces, which allow any user to extract metadata from their URLs.

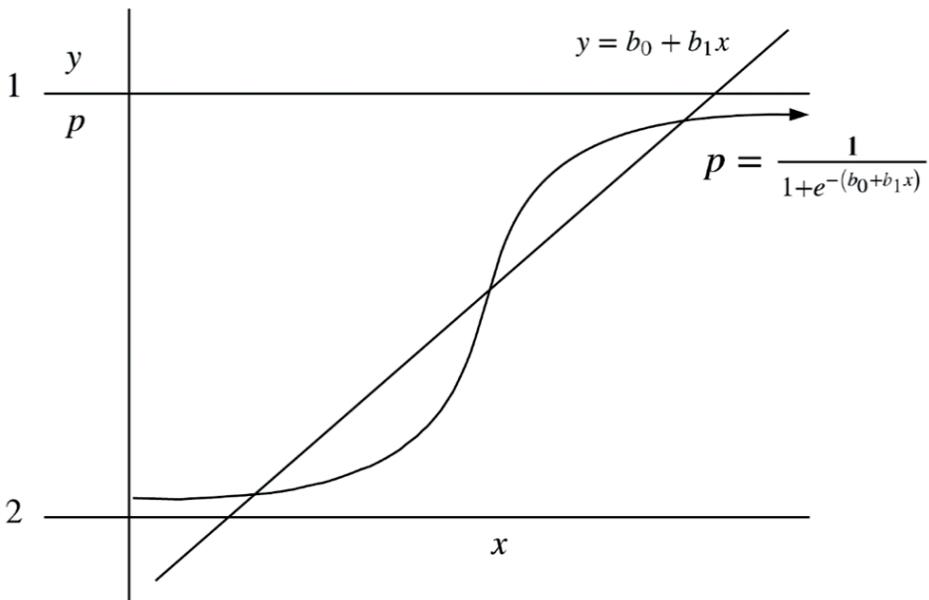
² Free data extraction software, which can collect any requirements (attribute on a page) asked.

money that was initially proposed as a goal, then its probabilistic relationship must be determined by the use of regression binary logistics, as suggested in the literature (Courtney, Dutta & Li, 2017; Mollick, 2013; Kunz *et al.*, 2017; Davies & Giovannetti, 2018), where a dummy variable is used as a dependent variable, indicating the success (1) or failure (0) of a campaign, and it is in turn controlled by the independent variables to be evaluated (signals), both separately and in combinations.

The SPSS statistical program will be used to carry out this analysis, which has the necessary tools for carrying out such research (Kunz *et al.*, 2017).

This type of analysis is more easily detailed by its distinctive s-shaped graphic, which works in a range from 0 to 1, as can be seen in Figure 2.

Figure 2. Differences between linear regression and logistic regression



Source: saedsayad.com, n.f.

Through this type of analysis, the idea is to find combinations of independent variables that test the highest predictive values about the success of a campaign, while these have the least number of variables for determining the more harmonious effects (Tranmer & Elliot, 2005).

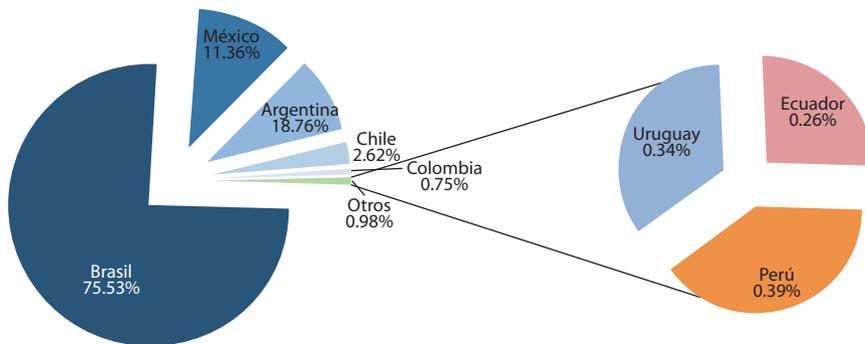
At first, binary logistic regression asks for a bi-variant evaluation, where the unique effect of each independent variable or signal and its significance in the contrast of its Chi square (Canela, Lora & Estrella, 2011) will be evaluated. To reinforce the understanding of these relationships, contingency tables can first be generated to evaluate the contrast of the hypothesis and an association measure (Walsh, 1987).

4. Results

As of November 26, 2018, 21 803 projects were collected, 6586 of these were successful, corresponding to 30.21%.

As expected, many of the projects were from Brazil, comprising 75.53%, mainly in Catarse but also in Idea.me; Mexico followed with 11.36% and Argentina with 8.76%; the sum of the other sources groups about 5%. This demonstrates the imbalance in crowdfunding development in the region and the platforms that represent them, as it is clearly observed in Figure 3.

Figure 3. Classification of all projects by their country of origin



As for the performance of the projects, it is necessary to understand the number of investors that can be attracted. The mode is very clear, the overall mode of the projects is zero investor and most investors accumulate in very few projects, making the crowdfunding very uneven, where projects that fail do it outright and those that success are very little (Mollick, 2013); after all, only 2843 projects or 13.20% have more than 100 investors and the odds are decreasing significantly; 317 projects or 1.45% have more than 500 investors.

The use of own webpages to generate traffic and value outside the platform follows a pattern not entirely homogeneous across the platforms, being higher its use in Idea.me, approaching 57%. However, the average is 32.60% of use, very close to 28.90% and 29.84% seen on the Catarse and Kickstarter platforms, respectively. Thus, its use is representative, but not widespread, so it can be an important differentiating tool.

The use of social networks under this same role is much more common, representing an average of 57.26% in the conglomerate, likewise it is not a continuous trend across platforms, it was the Catse projects that raised this value, its use in Idea and Kickstarter being between 20% and 25%, respectively.

Regarding the use of networks, strong trends can be distinguished in the favoritism of certain pages, the clearly preferred is Facebook which is presented in two thirds of the times in which the application of a social network appears; this trend is maintained by the platforms, less on Kickstarter where Instagram has a dominant

role; this can be seen in Table 4, where the use of Facebook in Kickstarter projects did not generate a significant positive effect. In the case of Idea.me, the use of Facebook is almost absolute. Likewise, the use of Twitter and Instagram is significant and the entrepreneur finds them value; but it is in the Facebook format that the presentation of a project is more comfortable, especially in the eyes of the Latin entrepreneur.

The use of rewards follows the same pattern across platforms, because while a higher usage was distinguished in Idea, whose average is seven, the overall average is 4. As far as mode is concerned, it concentrates on four rewards with a use of 22.52%, the number of which is significant since it allows enough complexity for entrepreneurs to offer various products without making it excessively complicated for their execution.

The use of multimedia in general is lower in the use of images, for example, the mode of the of projects is one; however, these changes depend on the platform, since on Kickstarter it is two and in Idea.me it is four; for the Cating platform the images did not take on such importance and a very broad mode was found in one.

Likewise, the favoritism in the use of videos and gifs corresponds to one, this is understandable from the presentation format of the projects, which gives a fundamental importance to a first video, presenting it at the beginning of the page, but the others relegating to the description section next to the other media. Its cost and greater complexity can be the factors that make this an uneven distribution, to such an extent that only 1570 projects have more than two videos, representing only 7.20% of the population.

The use of mechanisms during the campaign, such as updates, is surprisingly low; its use is very similar in all platforms, mostly on Kickstarter with 35.74%, but it reduces to 32.72% in Catarse and 22.39% in Idea.me. In addition to this, among those who use it, mode is found in an update and concentration significantly to one, two and three, which accounts to 17.78% of the observation. On the contrary, those who use more than five updates represent 12.47%, and those over ten only 6.06%.

Binary logistic regression could be successfully developed, and it was carried out under three different models. On the one hand, the variables of number of rewards, number of images, number of videos and gifs, number of updates, use of social networks and reward limit can be evaluated for the entire sample. But, this is not the case for the variable number of comments that can only be evaluated for the Kickstarter and Catarse platforms; and for the use of the variable staff picked that can only be evaluated for the Platform Kickstarter, due to the structure of each platform and the tools they have.

For the first model, as can be seen in Table 2, the use of the eight variables initially described of the total extracted projects, is evaluated. In this way, the nullity model is used ($\chi^2(8) = 7218.68, p < .001$) to which the next model adapts significantly better with 76.1% of cases classified correctly, this meaning that such a percentage of cases under the following model would be correctly classified as successful and unsuccessful.

The model also explains between 31.4% (Cox & Snell R^2) and 41.9% (Nagelkerke R^2) of variance. This means that between 31.4% and 41.9% from the volume of successful projects are due to the predictors mentioned below, the rest of the volume are explained by other predictors not taken into account. This can be understood as a circle that encompasses between 31.4% and 41.9% of projects that marks the impact that predictors (signals) had.

Table 2. Binary logistic regression for success statistics in the data

Predictors	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
							Lower	Upper
Facebook account	.145	.042	12.069	1	.001	1.156	1.065	1.255
Twitter account	.451	.042	113.006	1	.000	1.570	1.444	1.706
Instagram account	.826	.039	457.446	1	.000	2.284	2.117	2.463
Number of rewards	.098	.005	452.687	1	.000	1.103	1.093	1.113
Number of images	-.015	.002	50.421	1	.000	.985	.981	.989
Number of videos and gifs	-.040	.012	10.606	1	.001	.961	.939	.984
Number of updates	.287	.006	2051.481	1	.000	1.333	1.316	1.349
Reward limit	.310	.052	35.022	1	.000	1.364	1.231	1.511
Constant	-2.275	.050	2037.045	1	.000	.103		

Predictors are understood as correct by maintaining a significance level less than 0.05. This can be observed in the Sig column, Table 2. As can be seen, all variables meet it, accepting their relevance and effect as predictors of success in launching a Crowdfunding campaign whether this is a positive or negative effect.

The standard regression coefficient (B) indicates the direction of the predictor effect. It can be observed how the use of social networks, the number of rewards, the number of updates and the limit of rewards have a positive effect, which means that the greater the use of these signals the greater the probability of success. The number of images and number of videos and gifs indicate a further tendency to fail if there are more of these signals available. This can be evidenced by their Exp(B) odds ratios, which are less than 1, indicating a decrease in the probability of success.

The confidence level has consistent probability ratios and it allows to accept the hypotheses that the other coefficients have. This is noted in minor and large Exp(B) which are both ≥ 1 or ≤ 1 .

A second logistic regression was developed only including projects extracted from the Kickstarter and Catarse platforms, as can be seen in Table 3, with the additional predictor number of comments. The results show that the data fits well with the model ($\chi^2(9) = 6641.47, p < .001$), with 82% of cases classified correctly.

The model also explains a Cox & Snell R^2 equal to 29.5%, while a Nagelkerke R^2 equal to 42.2% was also obtained, which as would be expected, is highly similar to the first model.

Table 3. Binary logistic regression for kickstarter and Catarse success statistics

Predictors	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
							Lower	Upper
Facebook account	.863	.048	327.525	1	.000	2.370	2.159	2.603
Twitter account	.131	.066	3.974	1	.046	1.140	1.002	1.297
Instagram account	.750	.095	62.947	1	.000	2.117	1.759	2.548
Number of rewards	.103	.006	348.305	1	.000	1.108	1.096	1.120
Number of images	-.006	.003	4.170	1	.041	.994	.989	1.000
Number of videos and gifs	-.002	.012	.026	1	.872	.998	.974	1.022
Number of updates	.312	.008	1722.780	1	.000	1.366	1.346	1.387
Number of comments	.069	.009	61.246	1	.000	1.071	1.053	1.090
Reward limit	.044	.062	.506	1	.477	1.045	.926	1.180
Constant	-3.692	.113	1067.416	1	.000	.025		

When assessing its significance level, it is found that the number of comments is a relevant predictor in achieving the success of the campaigns, as well as the rest under this model, except the variables number of videos and gifs, and the reward limit.

By timely analyzing the signal comments, it can be observed a significance level less than 1 that confirms its predictor effect, a positive B and Exp(B), indicating the predictor effect of success, and a congruent confidence level that confirms the hypothesis. Therefore, the more comment usage, the greater the prediction of success.

Finally, a third regression observed in Table 4 had to be developed to evaluate the data related to the Kickstarter platform, in order to include and analyze the variable staff picked, so the data meets significantly with the model ($\chi^2(9) = 1598.99$, $p < .001$)

The model also explains between 43.00% (Cox & Snell R^2) and 59.10% (Nagelkerke R^2) of variance. This means that the amount between 43.00% and 59.1% of successful projects are due to the nine predictors used, which are slightly larger margins than the previous models.

Table 4. Binary logistic regression for Kickstarter success statistics

Predictors	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
							Lower	Upper
Facebook account	20.880	1602.290	.000	1	.990	1169 119607.255	.000	.
Twitter account	3.465	.871	15.841	1	.000	31.986	5.806	176.227
Instagram account	3.602	1.032	12.171	1	.000	36.656	4.846	277.247
Number of rewards	.108	.016	47.942	1	.000	1.113	1.080	1.148
Number of images	-.007	.008	.960	1	.327	.993	.978	1.007
Number of videos and gifs	-.090	.026	12.384	1	.000	.914	.869	.961
Number of updates	.378	.025	223.360	1	.000	1.459	1.388	1.533
"Staff picked"	-1.672	.166	101.976	1	.000	.188	.136	.260
Reward limit	-.536	.175	9.334	1	.002	.585	.415	.825
Constant	-27.919	1602.291	.000	1	.986	.000		

The data of the latest model present in Table 4 show alterations in the use of Facebook account, demonstrating a significance level very close to 0.05, making it irrelevant. The case is similar for more images that are presented, which apparently have no greater influence on the prediction of success. The fact of being selected as a favorite by the platform enhances the possibility of success.

In this way, it is understood under these three different models that all the signals evaluated, except the number of images and number of videos and gifs, have positive effects for the success of a campaign, these fluctuating slightly depending on the model and population evaluated. The other successful effects are understood to be intrinsic to product quality or network traction.

Most of the results found agree with the data obtained in the literature, strengthening much more the validity of the signal because they have been developed at different times and on populations with significant geographical differences. The studies of Mollick (2013) and Kunz *et al.* (2017) show the Kickstarter universe and how the use of these signals comprise a predictor of success in the campaigns. Kraus *et al.* (2016) demonstrate that signals are also applied to European platforms, and state that these can be replicated under certain modifications in other crowdfunding models as demonstrated by Ma *et al.* (2017); Vismara (2018) and Ahlers *et al.* (2015) in their studies on crowdfunding for acquisition of shares. There are also certain distinctions, the main one is the negative effect that was found with the greatest use of images, videos and gifs, when the rest of the evaluated literature indicates otherwise. Another difference with the literature is that the success rate is significantly higher in the American context as expected, especially on Kickstarter, where in Mollick's year of study, it added up to 48.10% and in Kunz's study years it would point to a figure of

46.13% of success, presenting a fairly stable level, which explains that while the number of published projects has continued to increase, the likelihood of success remains; while this work elucidated a much stronger reality for the Latin crowdfunding, where there was 30.21% of success from global extraction.

5. Conclusions and discussion

Crowdfunding in Latin America is still in its early stages and it demonstrates many behaviors accordingly, such as campaign conglomeration and the success of campaigns in very few categories, always focused on commodities or based on content creation, peer products and little variety in rewards that do not go beyond slight changes in profits. It is understood that in most cases its use by the entrepreneur tends to the extension of a personal brand, whether by that of a particular band, publisher or author, or the creation of games by a specific agency. This means that the traction of the product or service is generated externally to the platform, and the latter is used as an early payment tool. This is more than as an e-commerce market independent from others.

A big difference has been found in the advancement of crowdfunding depending on the country of origin of the project, this is particularly noticeable from the beginning in the number of projects that have been extracted, where 16 731 projects have generated in Brazil, and 56 in Ecuador. It is clear that it is limited to the use of the particular platforms of the study, but in the same way no country has a platform even close to the magnitude of the Brazilian Catarse; moreover, most countries do not have a strong national platform, such as the case of Mexico (Rodríguez, 2017).

From this developing difference, the distribution in the usage categories has changed, where a concentration in categories based on multimedia or information products can be seen in countries with little development; on the contrary, in more developed countries there is a greater importance in digital games and miscellaneous products. This reflects the variety of entrepreneurs on these sites and their consumers, as well as the quality and cost of shipping services and the confidence in the projects and the platforms that filter them.

It is important to emphasize the general little use of quality signals, since there is marginal use in all of them, which makes that very few projects accumulate the use of these tools. In a global sense, the use is less; for example, the use of website is 32.60%, the use of at least one social network is 57.26%, the mode in the use of rewards is equal to four; the use of images is one and approximating to zero. This is exactly the same case with videos, and the use of updates does not take off from scratch in 64.85% of cases. In other words, there is very little seriousness and resources in most projects, so their feasibility since their origin was almost zero.

This last observation is somewhat positive given that, despite having such a marginal percentage of success, it has been demonstrated under a binary logistic regression that all signals presented, except the use of images, videos and gifs, a very relevant positive influence in the likelihood of success of a campaign, proving that its use can predict between 31.4% and 41.9% of a campaign's success. The effort through these signals generates massive differences in the overall poor quality of the projects. In this way, a good use of social networks, the use of a website to explain the product

or service, the extension of a large portfolio reflecting in product quality and communication with the consumers at each stage of the project, make a big difference.

The efforts that the platforms put in to improve the presentation and traction of the projects of its clients, as well as the natural evolution of online shops and related infrastructure that will arise in Latin America will undoubtedly enhance the use of services like reward-based crowdfunding. This is the beginning of a long journey that will only be accelerated by developing strategies to captivate a very wary market, which is very large and incrementally adept at online transactions and the influence of more developed countries.

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