

The Role of Awareness in Crowdfunding Campaigns

The Empirical Evidence for the Caribbean

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Abstract

Crowdfunding is a financial alternative that has exhibited sustainable growth over the past decade. Further, it has been positioned as a promising mechanism for LAC countries to improve their financial conditions. Therefore, regional governments need to understand the key enablers of crowdfunding to foster this financial alternative. The main objectives of this report are to identify the key conditions that should be present in a country and to assess the current status of crowdfunding in Jamaica and Trinidad and Tobago. To accomplish this, we designed a model based on current state-of-the-art techniques for this field and tested it with data retrieved from 718,264 crowdfunding campaigns from 2013 through 2015. The main results are that social media engagement and the reliability of the associated e-commerce are key enablers of crowdfunding. These results provide useful insights for policymakers in developing countries.

JEL codes: C31, G23, G24

Keywords: crowdfunding, crowdfunding awareness, LAC, Jamaica, Trinidad and Tobago

1. Introduction

Crowdfunding has recently emerged as an alternative tool to access economic resources to overcome hurdles in current financial markets. This novel mechanism has been developed mostly around creative industries, entrepreneurial endeavors, and donations. Indeed, early crowdfunding experiences emerged in support of the film and music industries, which helped small producers and artists circumvent the harsh conditions in which to raise funds and get exposure, creating a community that was interested in supporting these industries.

Latin American and Caribbean (LAC) countries exhibit underdeveloped financial markets despite improvements in their structure, completeness, and interconnection over past decades (World Bank, 2012). In this region there are still low levels of availability of venture capital and high barriers to loans (Schwab and Sala-i-Martin, 2015) Therefore, crowdfunding is a promising opportunity to develop wealth in LAC countries because it bypasses traditional financial barriers, thus increasing the potential for creative industries in the region. This study specifically assesses the current state of crowdfunding in Jamaica and Trinidad and Tobago.

The goal of this report is to understand the key enablers of crowdfunding campaigns, particularly the conditions required for full deployment in all industries that make up the creative economy. The study focuses on the cognitive constraints that affect the success of crowdfunding campaigns and considers how aware the population is of crowdfunding's potential and the factors that influence it. By awareness, this study means how consciously a country's population recognizes and effectively uses crowdfunding as a financial mechanism. Identifying those cognitive factors provides useful insights into the best path for public policy to improve the financial effectiveness of crowdfunding for creative industries, such as music and film production, computer programming, and advertising.

The rest of this section provides the historical and sociological background of crowdfunding, particularly in LAC. The second section focuses on describing enablers of crowdfunding awareness. The analytical tool helps us understand the essential conditions required to boost the development of crowdfunding and presents the hypotheses developed for this study. The third section explains the methodology and limitations of enablers of crowdfunding awareness. The fourth section presents the main results. The fifth section looks at crowdfunding awareness in Jamaica and Trinidad and Tobago. The final section presents some conclusions about enablers of crowdfunding awareness and lists some recommendations to foster development of crowdfunding in LAC.

1.1. The Emergence of Crowdfunding

The essential idea of crowdfunding—raising money from individual contributions to support ideas or projects—dates back to decades ago. The first major crowdfunding case in the United States was one of the most iconic projects in history: erecting the Statue of Liberty (Davies, 2013).¹ Modern crowdfunding emerged in 1997 when the British rock band Marillion raised money through an internet campaign. In 2003, *artistShare*, the first online platform, was launched and since then crowdfunding has gained traction. After the 2008 financial crisis, crowdfunding began to expand rapidly because of the difficulties of raising funds through traditional methods (Bruton, Khavul, Siegel, et al., 2015). Indeed, the best-known crowdfunding platforms, Indiegogo and Kickstarter, were launched in that period, and since then crowdfunding has spread worldwide and is a major tool of financial technology, or fintech.²

Over the past decade, technological and regulatory advances have fostered the development of new mechanisms to finance entrepreneurial endeavors (Bruton et al., 2015). In recent years, crowdfunding has become positioned as a financial alternative (Belleflamme, Lambert, and Schwienbacher, 2014) because of its ability to bypass traditional financial barriers. Crowdfunding stands out because it is promoted by an enabling organization, because of its direct interaction between people and fundable projects, and because of the affiliations that are generated between supporters and entrepreneurs (Giudici, Nava, Lamastra, et al., 2012). Furthermore, crowdfunding encourages entrepreneurs by creating trust based on the wisdom of the crowd overcoming problematic cognitions such as discouragement and moral hazard (Giudici et al., 2012).

Crowdfunding has grown remarkably. From 2013 through 2015, worldwide funding increased by 464 percent, to \$34.44 billion from \$6.1 billion (Massolutions, 2015). In 2015, Asia experienced the highest annual funding growth rate (210 percent), with other regions around the world showing growth of 50 percent or more. Moreover, projections for crowdfunding are promising for the next decade. It is estimated that the total potential crowdfunding market worldwide will be between \$90 billion and \$96 billion a year by 2025 (World Bank, 2013). This growth estimate shows the popularity of this mechanism as an alternative source of capital and the huge opportunity for entrepreneurs and emerging industries.

Crowdfunding has evolved into five types: (i) donations, (ii) rewards, (iii) equity, (iv) lending, and (v) royalties. Each type is in a different development stage due the regulatory

¹ In June 1885, this diplomatic gift arrived in New York in pieces, but its assembly date was uncertain because of the money needed for the statue's pedestal. Joseph Pulitzer launched a fundraising campaign through *The New York World* newspaper and raised more than \$100,000 from 160,000 donors in only five months.

² Fintech is a service sector that makes the financial system more efficient using information technology (IT).

limitations that mainly hamper equity, lending, and royalties. Rewards and donations are the most common, in 2015 raising 7.79 percent and 8.28 percent of all the funding worldwide, respectively (Massolutions, 2015). Noticeably, the great majority of money raised using rewards is for the creative industries. Moreover, despite regulatory obstacles, equity, lending, and royalties funding raised 72.96 percent, 7.44 percent, and 1.17 percent, respectively, of the total funding volume in 2015 (Massolutions, 2015).

1.2. Current State of the Crowdfunding Industry Worldwide

The crowdfunding industry has developed mainly in Europe, Australia, the United States, and Canada, and thus public policies and regulatory instruments have mostly been created in those countries. In 2015, the distribution of total funding volume worldwide was markedly uneven: North America raised 49.94 percent of the total; Asia, 30.60 percent; Europe, 18.81 percent; South America, 0.25 percent; Oceania, 0.19 percent; and Africa 0.07 percent. Moreover, according to Kickstarter (one of the largest reward-based crowdfunding platforms in the world), the countries that raised the most money through 2014 were the United States (\$663.32 million), the United Kingdom (\$54.43 million), Canada (\$44.91 million), and Australia (\$31.79 million). Finally, in these countries, crowdfunding focuses on funding entrepreneurial, rather than charitable, endeavors (see Appendix 2).

Previous studies identified facilitating factors for crowdfunding in developed economies. Factors included efficient regulatory frameworks, strong information and communications technology (ICT), a regulated online marketplace, and entrepreneurial synergy (see, for example, World Bank, 2013). Furthermore, crowdfunding fosters innovation, supports the emergence of new companies, and leverages creative industries, offering businesses, artists, and creators in developing countries the opportunity to boost their economic strengths and overcome traditional financial restrictions and limitations. For that reason, crowdfunding is acknowledged as essential for developing countries to leapfrog the developed world (World Bank, 2013).

In the LAC region, crowdfunding is still a nascent industry with little regulation (only Mexico has equity crowdfunding legislation) and only a few platforms (Wardrop, Rosenberg, Zhang, et al., 2016). However, the growth of regional crowdfunding platforms in LAC between 2010 and 2013 exceeded all other regions (World Bank, 2013). Moreover, the World Bank estimates the total market potential for crowdfunding by 2025 to be up to \$11 billion in LAC (World Bank, 2013). Table 1 shows some statistics about the crowdfunding types in LAC.

Table 1. Crowdfunding in LAC

Crowdfunding Type	Total Money Raised (\$ million)	Growth (%)	Period
Reward	25	171.3	2013–15
Equity (real estate)	19.3	1,043.1	2013–15
Equity (other sectors)	2.2	1,266.7	2014–15
Donation	8.6	339.0	2013–15

Source: Authors based on data from Wardrop et al. (2016).

Table 1 shows the overall growth trend in crowdfunding in LAC. Reward-based crowdfunding raised 45.4 percent of the total for the industry, probably because there are no regulatory conditions. On the other hand, equity and real estate crowdfunding showed the highest growth rates, which shows their potential in LAC despite the regulatory efforts still needed.

In the Caribbean, crowdfunding shows great potential since most Caribbean countries have underdeveloped financial markets, as evidenced by the high interest rate spread in the Caribbean compared to high-income OECD countries. The high spread demonstrates the poor intermediation in the region due to the difference between commercial bank borrowing and lending rates (Holden and Howell, 2009). Furthermore, in the Caribbean, access to loans and the availability of venture capital is lower than in Latin America (Schwab and Sala-i-Martin, 2015). Asymmetric information, adverse selection, and moral hazard are factors that the literature identifies as the main roots of low performance on the interest rate spread, intermediation, access to loans, and availability of venture capital (Holden and Howell, 2009). This problematic reality poses major obstacles for small investors and entrepreneurs who seek financing. Limited access to credit is one of the causes of low competitiveness (Rajan and Zingales, 2004) and stagnated regional economic growth (IMF, 2013).

Crowdfunding can effectively address these issues. First, it can provide transparent platforms where fundraisers disclose information about the projects looking for funding, thereby reducing asymmetric information and minimizing adverse selection. Second, crowdfunding reduces intermediation costs as a result of more symmetric information and the fixed low rates associated with making transfers through its platforms. Third, crowdfunding platforms require investors and entrepreneurs to link a verified bank account to their campaigns, which enhances trust and minimizes moral hazard. Finally, crowdfunding communities are built on a framework of trust that discourages moral hazard through traceability and social engagement. Furthermore, the potential is enhanced by the high cultural production competitiveness in the Caribbean (UNESCO, 2013).

Given the importance of crowdfunding for LAC countries, the following sections develop a model that identifies the essential conditions needed to boost this instrument and to provide guidance for the efforts to implement it effectively.

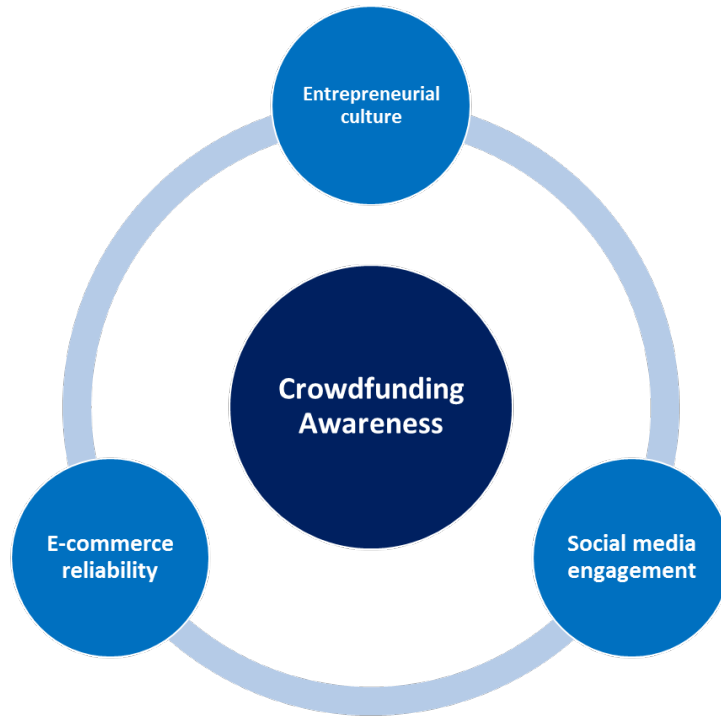
2. Factors that Enable Crowdfunding Awareness

The current literature emphasizes the importance of ICT infrastructure, institutional financial services, and economic and business regulations to enhance crowdfunding development in the long term (De Leon, 2016; World Bank, 2013). However, crowdfunding has gained traction in countries with low performance on these indicators and proved to overcome the traditional financial and regulatory barriers to accessing funds (Giudici et al., 2012; World Bank, 2013). These facts suggest that there are other factors that contribute to the development of crowdfunding.

Crowdfunding is a financial alternative that relies heavily on social interaction. Existing research suggests that crowdfunding has not been studied from this perspective. The literature shows that simple awareness of others' interactions serves as a social lubricant that facilitates knowledge transfer and encourages people to interact (Leonardi and Meyer, 2015). Therefore, the population's awareness is a determinant of crowdfunding development since the creation and growth of crowdfunding communities depend on awareness. Therefore, it is important to understand which factors are essential to boosting crowdfunding awareness.

This study aims to identify quantifiable factors that influence crowdfunding awareness, which we define as how consciously a country's population recognizes and effectively uses crowdfunding as a financial mechanism. For this study, we built a model around three major components that may influence crowdfunding awareness: entrepreneurial culture, the population's engagement in social media activity, and the reliability of e-commerce. A graphic representation of the crowdfunding awareness model we propose is shown in Figure 1.

Figure 1. Crowdfunding Awareness Model



This study measures the correlation of these essential factors with crowdfunding awareness. The remainder of this section explains each of the components of the crowdfunding awareness model.

2.1. Entrepreneurial Culture

In a broad sense, entrepreneurs “are persons who are ingenious and creative in finding ways that add to their own wealth, power, and prestige” (Baumol, 1990). For that reason, entrepreneurship it is not only concerned with business-related endeavors, but also with those related to subjective welfare or wellbeing (Naudé, 2013). Therefore, an entrepreneurial culture facilitates and encourages actions, activities, or methods that can increase personal wealth and income.³ For that reason, a developed entrepreneurial culture is needed to boost crowdfunding since it is a financial alternative that overcomes traditional barriers to funding for entrepreneurs, such as the dearth of capital, intermediation costs, and information asymmetries (Cosh, Cumming, and Hughes, 2009; Vanacker and Manigart, 2010).

³ <http://gemconsortium.org/wiki/1142>

Hypothesis 1: A country's entrepreneurial culture drives crowdfunding awareness.

2.2. Social Media Engagement

Social networks are essential to enhance crowdfunding awareness since they provide the channels through which private and public information flows and a common place to monitor others' activities (Leonardi and Meyer, 2015; Stuart and Sorenson, 2005). Moreover, the number of direct social connections is positively related to information access and social influence (Borgatti, 2005; Freeman, 1978). Empirically, the number of Facebook contacts has been found to be positively related to the probability of a successful crowdfunding campaign (Mollick, 2014). Furthermore, social networks play a key role in funding entrepreneurial endeavors (Stuart and Sorenson, 2005), and social bonding, such as friends and family, is a key element of the success of fundraising for start-ups, particularly in early entrepreneurial stages (Agrawal, Catalini, and Goldfarb, 2015).

Hypothesis 2: Social media engagement influences crowdfunding awareness.

2.3. E-commerce Reliability

Trust in the technological reliability of financial transactions⁴ is imperative for any monetary exchange carried out online (Suh and Han, 2003). As an innovative financial mechanism, this is one of the first obstacles that crowdfunding should overcome. Using online transactions and their functionality are critical to the trustworthiness of crowdfunding. Therefore, developing trust around electronic payments is essential for crowdfunding's positioning since it is the only payment channel (Agrawal et al., 2013). This alternative financial mechanism closely resembles e-commerce since its operation relies on exchanging financial resources for tangible or intangible goods through an online platform (Gerber and Hui, 2013). Given this resemblance, familiarity with online marketplaces is important for developing trust around crowdfunding since people's understanding and trust is based on previous interactions and experiences with online transactions (Gefen, 2000; Kim, Ferrin, and Rao, 2008).

Hypothesis 3: The reliability of e-commerce drives crowdfunding awareness.

⁴ Note that the emphasis is on trusting the reliability of e-commerce. Thus, like the other two hypotheses, this one focuses on the perceptions of potential participants in a crowdfunding campaign, as opposed to the quantitative supply of e-commerce measured in terms of bytes supplied by the infrastructure in place.

3. Methodology and Limitations

This report uses a database from a reward-based crowdfunding platform; therefore, it leaves out data collected from other types of platforms, notably equity and debt crowdfunding platforms. We made this choice for several reasons. First, reward-based platforms are the initial point of contact that most start-ups and fundraisers have with this financial mechanism. Wider dissemination of these two types of crowdfunding is due to the lack of regulatory requirements to promote their operation, since they usually provide a non-monetary return to their supporters (Belleflamme et al., 2014). Second, these types of crowdfunding are highly social and involve supporters in the process of project development (Zheng, Hung, Qi, et al., 2016), thus enhancing people's engagement. Third, their functionality is similar to traditional marketplaces, making their adoption easier than the other types of crowdfunding (Zheng et al., 2016). Finally, information is publicly available, unlike equity crowdfunding platforms, which maintain the confidentiality of the information about most of the deals.

Data for this study was collected from Indiegogo's database. This platform covers 223 countries,⁵ making its database the most suitable source for this study. Descriptive statistics are provided in Appendix 1. Despite our use of a reward-based database, we believe our conclusions can be extrapolated to crowdfunding campaigns of other sorts, since measuring people's engagement with reward-based crowdfunding is suited for measuring people's awareness of this financial alternative.

We conducted a cross sectional regression to identify the relationship between crowdfunding success and the cognitive factors we identified: entrepreneurial culture, social media engagement, and e-commerce reliability. The period under study is 2013 through 2015, which corresponds to the period of the most recent available data about crowdfunding.

This study had methodological limitations. First, we cannot infer cause and effect since the study was cross-sectional and thus we were only able to identify the impact of cognitive factors on crowdfunding success. Second, the cultural variable was missing for some years in some countries. In those cases, this variable was calculated using statistical techniques relying on the available data.

⁵ <https://www.indiegogo.com/about/our-story>

4. Results

4.1. Regression Model

4.1.1. Dependent Variable

The study's dependent variable is the average of the crowdfunding awareness indicator for 2013–15. The crowdfunding awareness indicator measures the number of campaigns created using the Indiegogo platform per country of a total of 718,264 campaigns, including campaigns that were never launched. This variable captures awareness among potential crowdfunding users because it represents how intensively they use this tool to raise funds.

4.1.2. Control Variables

Two control variables were chosen for the study. First, population per country was chosen since countries with a larger population are more likely to have a higher number of potential candidates to fundraise using crowdfunding. Second, geographical distance acknowledges that physical proximity is a deterrent to trading even in online products and services (Blum and Goldfarb, 2006). Therefore, given that Indiegogo is a U.S.-based platform, the geographical distance to that country was included as a control variable.

4.1.3. Independent Variables

The model comprises the average of the three explanatory variables: e-commerce reliability, social media engagement, and entrepreneurial culture.

E-commerce reliability: The number of internet secure servers in a country is used as a proxy for trust in e-commerce since secure servers increase the reliability of e-commerce systems. Reliability of e-commerce measures whether transactions will be conducted through a predetermined protocol and whether the information submitted will be kept confidential. Internet secure servers considerably reduce the level of anxiety related to conducting e-commerce transactions since these servers guarantee secure end-to-end data transmission through encryption protocols (United Nations, 2016). For this reason, secure servers are mainly used in e-commerce transactions (OECD, 2005). Moreover, this variable has been used for similar purposes in previous studies (OECD, 2005) and was obtained from the World Bank's World Development Indicators database.

Social media engagement: This variable is obtained from the *Global Information Technology* report, which is published by the World Economic Forum in partnership with

INSEAD and Cornell University.⁶ This variable measures how extensively virtual social networks (e.g., Facebook and LinkedIn) are used in a country.

Entrepreneurship culture: This variable is obtained from the World Entrepreneurship Monitor database called “cultural and social norms.” It is defined as “the extent to which social and cultural norms encourage or allow actions leading to new business methods or activities that can potentially increase personal wealth and income.”⁷

4.2. Regression Results

This study uses negative binomial regression since the dependent variable range is non-negative integers and over-dispersed, making Poisson regression inadequate. The descriptive statistics of the variables are shown in Table 2.

Table 2. Descriptive Statistics

Variable	Observations	Mean	Std. Dev.	Min	Max
CrowdAw	92	2474.0	13271.7	0.0	126502.0
Distance	92	8886.5	3514.1	0.0	15290.0
Population (millions)	92	67.8	198.0	0.3	1360.0
E-comm	92	414.1	666.5	0.2	2713.4
Networks	92	5.5	0.7	3.2	6.6
Entrepre	92	4.7	0.8	2.6	7.4

Source: Authors.

The correlations between variables are shown in Table 3. There are no high correlations between variables. Moreover, the maximum variance inflation factor is 1.2 and the condition index is 2.5. Since the variance inflation factor is less than 10 and the condition index is less than 30, multicollinearity is not an issue for our dataset (Cohen et al., 2003).

Table 3. Correlation between Variables

	GDistance	Population	E-comm	Social	Entrepre
GDistance	1.000				
Population	0.175	1.000			
E-comm	-0.258	0.140	1.000		
Social	-0.269	-0.136	0.218	1.000	
Entrepre	0.054	0.150	0.226	0.120	1.000

Source: Authors.

Since the scales used for each variable are quite different, all were standardized to obtain coefficients suitable for comparison. Regression standardized coefficients are shown in

⁶ <http://reports.weforum.org/global-information-technology-report-2016/>

⁷ <http://gemconsortium.org/wiki/1142>

Table 4. The significance level is $p < 0.1$. The model exhibits joint statistical significance in the regressors since the Wald test is significant. Moreover, the value obtained for alpha is 1.032, proving over-dispersion of the dependent variable.

Table 4. Regression Results

Negative binomial regression	Number of observations = 92
Dispersion = mean	Wald $\chi^2(5) = 41.46$
Log pseudolikelihood = -708.35587	Prob > $\chi^2 = 0$

	Coef.	Robust Std. Err.	z	P>z	[95 percent Conf. Interval]	
GDistance	-0.030	0.130	-0.230	0.816	-0.285	0.225
Population	0.391	0.124	3.160	0.002	0.148	0.634
E-comm	0.642	0.318	2.020	0.043	0.019	1.265
Social	0.598	0.155	3.870	0.000	0.295	0.901
Entrepre	-0.023	0.109	-0.210	0.831	-0.238	0.191
Constant	6.703	0.122	55.100	0.000	6.464	6.941
alpha	1.083	0.127			0.860	1.363

Source: Authors.

4.3. Results Analysis

E-commerce reliability and social media engagement both show positive coefficients and statistical significance, thus confirming hypotheses 2 and 3 of this study. In other words, crowdfunding awareness is positively related to a high use of social networks and high e-commerce reliability. More specifically, the e-commerce reliability variable had the highest coefficient (0.642), followed by social media engagement (0.598).

To elaborate, e-commerce reliability had the highest impact on crowdfunding awareness of all variables considered. Low reliability of e-commerce blocked the dissemination of crowdfunding among potential users because of the low familiarity with traditional online marketplaces and scarce trust in providing sensitive information online. This result is congruent with crowdfunding having spread more across developed countries, where e-commerce is highly reliable.

Further, the use of social networks is important in enhancing crowdfunding awareness. High social media engagement guarantees better mapping of real relationships into the virtual world, improving the channels through which private and public information flows. Moreover, social media engagement facilitates the flow of social information, which is essential to the success of any crowdfunding campaign (Kuppuswamy and Bayus, 2013). Empirically, it has been proven that crowdfunding campaigns from entrepreneurs with a larger number of

Facebook friends enjoy higher probabilities of success (Mollick, 2014). This follows a network science finding that states that the importance of an individual inside a network could be measured by the number of its direct ties (Borgatti, Everett, and Johnson, 2013; Freeman, 1978). The more connections, the broader the reach of the information and its dissemination.

The results show that entrepreneurial culture is insignificant in enhancing crowdfunding awareness. This result could be evidence of crowdfunding's disruptive potential mentioned in the literature (Mollick, 2014) since crowdfunding was unaffected by the entrepreneurial cultures of countries. Since this was an unexpected result, we ran the regression again, calculating crowdfunding awareness only as the number of reward-based campaigns from creative economies, technology, and business, since their dynamics could be more influenced by an entrepreneurial culture. However, the results remained the same. The insignificance of entrepreneurial culture could be explained by the irrational herding behavior in crowdfunding reported in previous studies (Belleflamme, Omrani, and Peitz, 2015; Kuppuswamy and Bayus, 2013) since awareness is more influenced by trends and perception of others' behaviors rather than by its inner advantages as a financial mechanism.

Regarding control variables, geographical distance had a negative coefficient, but it was not significant (0.816). It is possible to infer from this result that geographical distance does not drive awareness of crowdfunding mechanisms. One explanation could be that, currently, the world is sufficiently interconnected, reducing the impact of geographical factors such as social-related frictions in distant transactions (Agrawal, Catalini, and Goldfarb, 2015). Country population had a positive coefficient and was significant, controlling for population effects as expected.

5. Crowdfunding Awareness: Jamaica and Trinidad and Tobago

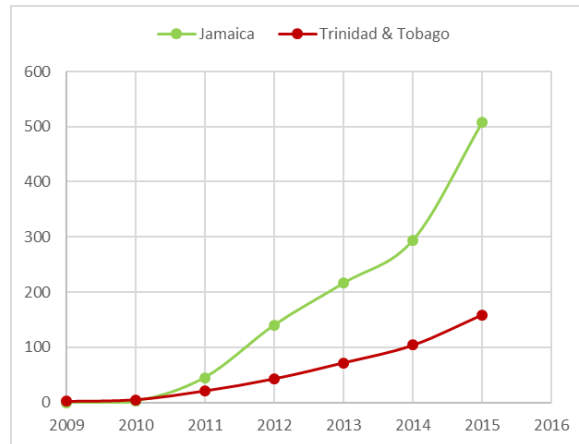
The evolution of crowdfunding awareness in Jamaica and Trinidad and Tobago over recent years are shown in Figure 2. Both countries exhibit positive trends, but evidently the trend in Jamaica is better. There is currently no evidence of a crowdfunding platform created in Trinidad and Tobago; however, two crowdfunding platforms have been created in Jamaica during the past four years. The first Jamaican platform, [isupportjamaica](https://www.isupportjamaica.com),⁸ was launched by the Jamaica National Building Society through JN Small Business Loans Ltd. in July 2013. The second, [PitchandChoose](http://www.newsamericasnow.com/caribbean-crowdfunding-startup-goes-live/),⁹ was launched in January 2015. PitchandChoose focuses on the entire

⁸ <https://www.isupportjamaica.com>

⁹ <http://www.newsamericasnow.com/caribbean-crowdfunding-startup-goes-live/>; www.pitchandchoose.com

Caribbean and is only donation-based. It is worth noticing that the inflection point for Jamaica's figures is 2014, one year after isupportjamaica was launched.

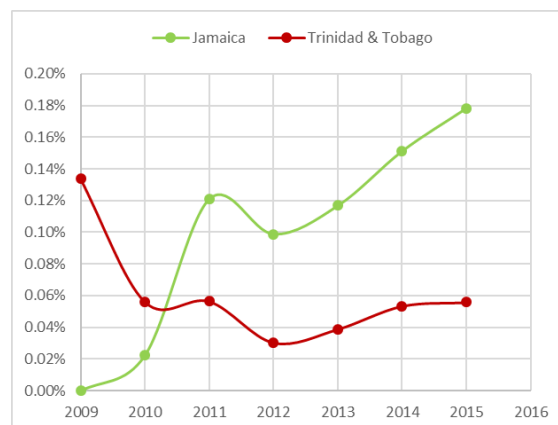
Figure 2. Crowdfunding Awareness Evolution



Source: Authors

To compare the evolution of awareness with other countries, the crowdfunding awareness indicator was divided by the total number of campaigns worldwide (Figure 3). According to this evidence, Trinidad and Tobago was ahead of Jamaica during the first two years after Indiegogo was launched. However, since 2011, Jamaica's campaign share has been higher. This figure shows stagnated growth in Trinidad and Tobago, compared to greater evolution of crowdfunding awareness in Jamaica, which showed steady growth from 2012 to 2015. This growth confirms the faster growth of crowdfunding awareness in Jamaica compared to worldwide evolution.

Figure 3. Share of Crowdfunding Awareness Worldwide



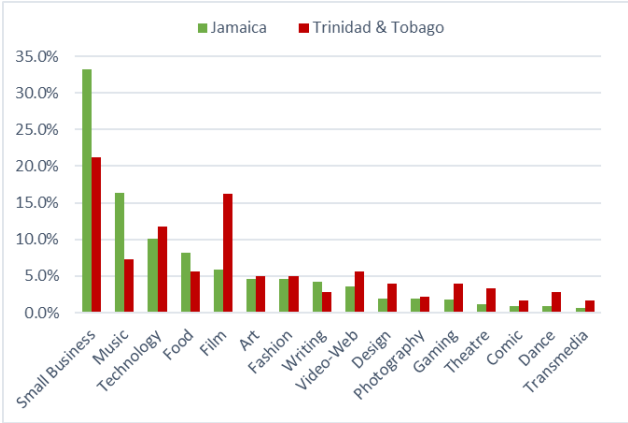
Source: Authors.

As shown in Appendix 2, during 2015, Jamaica's population created 508 campaigns, of which 27.75 percent were related to creative industries and technology, and 72.25 percent were for

charitable purposes. In Trinidad and Tobago, the population created 159 campaigns, of which 33.96 percent were related to creative industries and technology and 66.04 percent for charitable purposes. According to Appendix 2, crowdfunding is used more for entrepreneurial endeavors than charitable ones in developed economies. Trinidad and Tobago has a higher GDP than Jamaica and its percentage of entrepreneurial campaigns is higher, which suggests that Trinidad and Tobago is more developed than Jamaica.

Figure 4 shows crowdfunding awareness by category. The figure shows that in both countries campaigns related to small business had the highest awareness. However, for the remaining categories the results are different between the two countries. In both cases, among the creative industries, music, food, and film have the highest crowdfunding awareness, but in different orders. In Jamaica, the population is most aware of campaigns related to music, food, and film; in Trinidad and Tobago, the order is film, music, and food. Those three sectors could be identified as those with the highest potential for development.

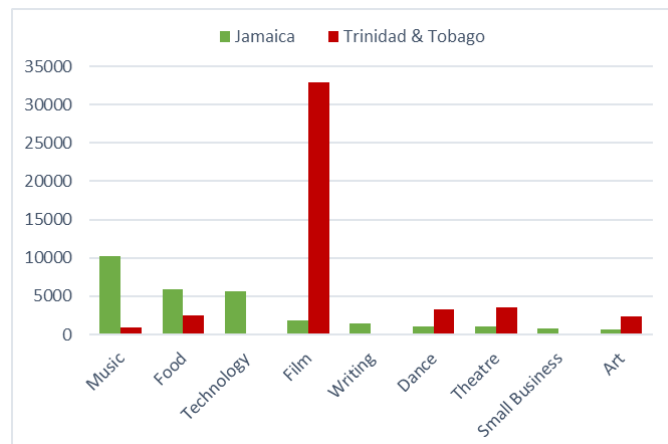
Figure 4. Share of Crowdfunding Awareness by Category, 2013–15



Source: Authors.

Top funded categories are shown in Figure 5. The creative industries with the highest funding in Jamaica are music, food, and film; in Trinidad and Tobago, film, theater, and dance receive the most funding. Those categories mentioned before for each country could be identified as the creative industries with the highest potential of being funded.

Figure 5. Top Funded Categories, 2013–15



Source: Authors.

Figures 4 and 5 suggest that the creative industries that should be prioritized in Jamaica are music, food, and film, in that order. In Trinidad and Tobago, film is the creative industry with the best indicators.

6. Conclusions

The current state of crowdfunding in Trinidad and Tobago is worrisome given the importance of the creative industries to its economic development.¹⁰ The growth rate in crowdfunding awareness is low and the country's global participation in this phenomenon has stagnated. In Jamaica, the trends are encouraging, with the growth rate increasing and the share of crowdfunding awareness worldwide trending higher. This confirms Jamaica's superior growth and development of crowdfunding compared with Trinidad and Tobago. Despite Jamaica's better indicators, crowdfunding could still be better positioned. The creative industries that should be prioritized in Jamaica are music, food, and film; in Trinidad and Tobago, film should be the priority.

The results of this study confirm the critical importance of e-commerce reliability for crowdfunding awareness. Trust in online transactions and familiarity with the functionality of traditional online marketplaces are essential to adopting crowdfunding. Moreover, the results suggest that, as with any social phenomenon, crowdfunding depends on social networks since they represent the conduits for private information. By contrast, results show that an entrepreneurial culture is not essential to enhancing crowdfunding awareness. The unexpected nature of this result could be evidence of the disruptive nature of this novel financial mechanism.

¹⁰ <http://www.creative.co.tt/>

Furthermore, it implies that the crowdfunding phenomenon surpasses cultural entrepreneurial prejudices since its dynamics are ruled by social signaling and trends.

These results provide some useful insights for policymakers in developing countries. The positive significant relationship between e-commerce penetration and crowdfunding awareness proves the urgency of strengthening electronic trading to enhance the development of this alternative financial mechanism and the size of the opportunities it offers. Given the importance of crowdfunding for developing economies, this task should be prioritized in their development agendas. The positive significant relationship between social media engagement and crowdfunding awareness proves the importance of virtual networking. Thus, governments should enhance internet access and quality in their countries to accelerate the mapping of real networking into the digital world, which would increase digital interactions and the potential market for crowdfunding. Finally, strengthening e-commerce and enhancing internet access and equality are essential not only to take advantage of this novel financial mechanism but also to correctly address the world economic opportunities that the fourth industrial revolution will offer in future decades.

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Appendix 1. General Findings from the Indiegogo Database

The Indiegogo database was obtained through a developed Python Script that downloaded the required information through Indiegogo’s application programming interface. This database includes 908,516 campaigns that raised \$848.37 million from 2008 through 2015. Table A1.1 shows the summary of this dataset. The total success rate was 7.71 percent, which is close to the one found by other sources.¹¹

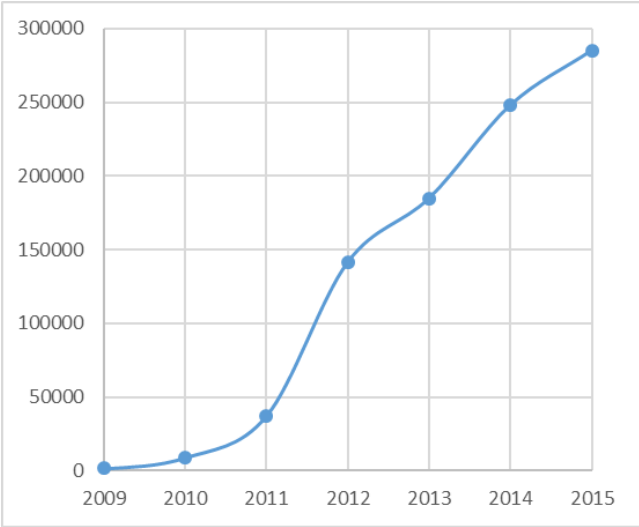
Table A1.1 Indiegogo Database Summary

	2008	2009	2010	2011	2012	2013	2014	2015	Total
Raised (\$)	0.11	0.22	3.65	19.41	88.45	177.36	240.9	318.27	848.37
Draft	159	266	2,684	18,601	67,786	90,223	115,691	103,393	398,803
Ended	744	1,230	6,226	18,624	73,932	94,743	132,456	181,758	509,713
# of campaigns created	903	1,496	8,910	37,225	141,718	184,966	248,147	285,151	908,516
Successful campaigns	9	20	339	1,900	5,987	10,349	11,616	9,943	37,467
Success rate (%)	1.21	1.63	5.44	10.20	8.10	10.92	8.77	5.47	7.71

Source: Authors.

Figure A1.1 shows the number of campaigns created per year. The figure shows a strong positive trend in the number of campaigns created through Indiegogo over the five-year period.

Figure A1.1 Number of Campaigns Created per Year, 2009–15

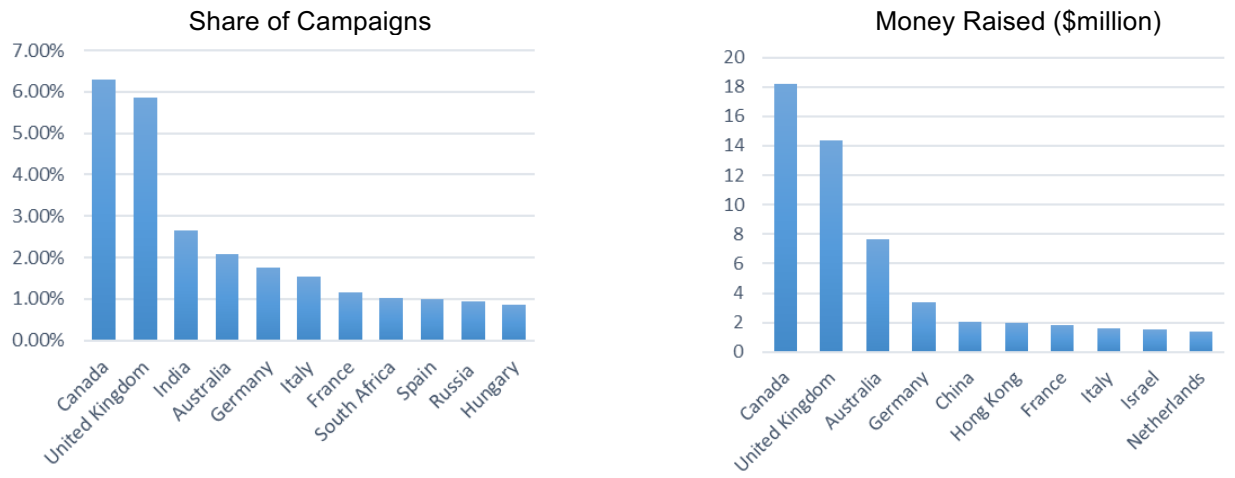


Source: Authors.

¹¹ <https://www.krowdster.co/blog/kickstarter-still-indiegogo.html>

For 2013–15, as expected, the United States had the most campaigns, with 52.79 percent out of the total, and is where the most money was raised, at an average \$164.45 million per year. Figure A1.2 shows the other top 10 performers.

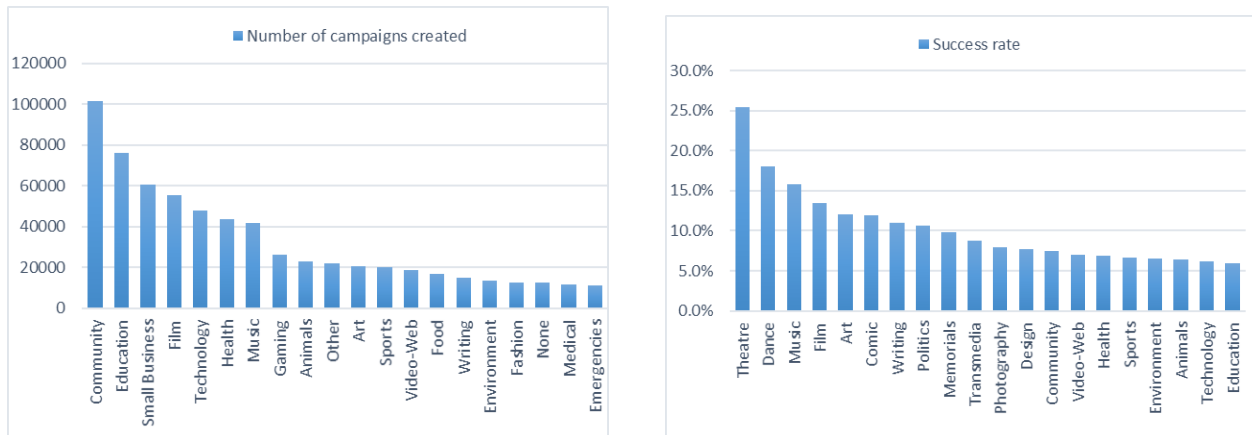
Figure A1.2. Indiegogo Country Statistics, 2013–15



Source: Authors.

Figure A1.3 shows the 20 categories with the most campaigns created and the highest success rates. Community had the highest number of campaigns, followed by education and small businesses. This shows the tendency of Indiegogo to be used for charitable purposes. Of the creative industries, film, music, and gaming had the highest number of campaigns created on this platform. Theater had the highest success rate (25.5 percent), followed by dance (18.1 percent) and music (15.8 percent). It is worth noting that 8 of the top 10 categories by success rate are creative industries, which confirms the importance of crowdfunding in developing the creative economy.

Figure A1.3. Indiegogo Category Statistics, 2013–15



Source: Authors.

Conclusions

Analyzing the Indiegogo database, trends show that crowdfunding has exhibited sustained growth in campaigns created and money raised. This result confirms the growth trends reported by other sources.¹² Moreover, these trends show that crowdfunding is still far from market saturation, which is why this financial mechanism is so promising. Further, the data shows the great importance of crowdfunding for creative industries. Around 45 percent of campaigns between 2013 and 2015 were from these industries and they had the highest success rates. Given the importance of the creative economy in LAC, this financial alternative must be strongly considered as a feasible option for its development in the region.

¹² <https://www.krowdster.co/blog/kickstarter-still-indiegogo.html>

Appendix 2. Crowdfunding Awareness Indicator

Table A2.1 presents the crowdfunding awareness indicator (285,151 campaigns) for 2015. It shows that crowdfunding is a phenomenon that is spreading around the world. However, it is worth noting that the countries with the highest ratio of creative industry and technology campaigns to charity campaigns are the developed countries. Thus, developing countries use crowdfunding more for donations than for entrepreneurial endeavors.

Table A2.1 Crowdfunding Awareness Indicator, 2015

Country	Crowdfunding Awareness Indicator	Creative Industry and Technology Campaigns (CTC)	Charity Campaigns (CHC)	Ratio CTC/CHC
Finland	431	246	185	1.3297
Canada	15306	8,459	6,847	1.2354
Spain	2671	1,471	1,200	1.2258
Denmark	729	390	339	1.1504
United States	129870	69,236	60,634	1.1419
Germany	5042	2,622	2,420	1.0835
Netherlands	1806	934	872	1.0711
Ireland	879	452	427	1.0585
Estonia	227	116	111	1.0450
Sweden	1060	535	525	1.0190
Australia	5523	2,784	2,739	1.0164
Luxembourg	60	30	30	1.0000
Italy	4731	2,323	2,408	0.9647
United Kingdom	16784	8,010	8,774	0.9129
Belgium	1018	481	537	0.8957
Poland	1252	590	662	0.8912
Norway	754	341	413	0.8257
France	3581	1,592	1,989	0.8004
Barbados	50	22	28	0.7857
Czech Republic	674	293	381	0.7690
Japan	528	222	306	0.7255
Switzerland	933	380	553	0.6872
Slovenia	468	190	278	0.6835
Latvia	475	191	284	0.6725
Israel	1414	562	852	0.6596
Austria	797	307	490	0.6265
China	935	358	577	0.6205
Portugal	1149	431	718	0.6003
Uruguay	201	74	127	0.5827
Slovak Republic	610	221	389	0.5681
Senegal	106	38	68	0.5588
Lithuania	517	180	337	0.5341

Country	Crowdfunding Awareness Indicator	Creative Industry and Technology Campaigns (CTC)	Charity Campaigns (CHC)	Ratio CTC/CHC
Trinidad and Tobago	159	54	105	0.5143
Botswana	93	31	62	0.5000
Brazil	1465	468	997	0.4694
Puerto Rico	418	133	285	0.4667
Libya	16	5	11	0.4545
Chile	828	249	579	0.4301
Burkina Faso	40	12	28	0.4286
Bulgaria	979	283	696	0.4066
Panama	278	80	198	0.4040
South Africa	3505	1,005	2,500	0.4020
Korea, Rep.	506	142	364	0.3901
Jamaica	508	141	367	0.3842
Thailand	871	239	632	0.3782
Argentina	911	249	662	0.3761
Romania	2657	725	1,932	0.3753
Macedonia, FYR	272	73	199	0.3668
Belize	72	19	53	0.3585
Morocco	456	118	338	0.3491
Singapore	2173	556	1,617	0.3438
Croatia	1256	319	937	0.3404
Bosnia and Herzegovina	406	102	304	0.3355
Russian Federation	3750	940	2,810	0.3345
Tunisia	268	66	202	0.3267
Ecuador	560	133	427	0.3115
Greece	2390	564	1,826	0.3089
Peru	1011	237	774	0.3062
Egypt, Arab Rep.	671	155	516	0.3004
India	10331	2,382	7,949	0.2997
United Arab Emirates	627	142	485	0.2928
Kazakhstan	290	64	226	0.2832
Mexico	3326	731	2,595	0.2817
Costa Rica	700	147	553	0.2658
Qatar	86	18	68	0.2647
Indonesia	1421	291	1,130	0.2575
Namibia	123	25	98	0.2551
Bolivia	164	33	131	0.2519
Turkey	2436	484	1,952	0.2480
Colombia	2203	436	1,767	0.2467
Ethiopia	130	25	105	0.2381
Malaysia	1322	246	1,076	0.2286
Georgia	459	85	374	0.2273
Vietnam	526	96	430	0.2233
Guatemala	502	89	413	0.2155

Country	Crowdfunding Awareness Indicator	Creative Industry and Technology Campaigns (CTC)	Charity Campaigns (CHC)	Ratio CTC/CHC
Bangladesh	440	77	363	0.2121
Cameroon	332	58	274	0.2117
Algeria	161	28	133	0.2105
Zambia	188	32	156	0.2051
Ghana	821	138	683	0.2020
Nigeria	1707	282	1,425	0.1979
Philippines	2253	372	1,881	0.1978
Suriname	31	5	26	0.1923
Uganda	864	131	733	0.1787
El Salvador	266	39	227	0.1718
Angola	35	5	30	0.1667
Venezuela, RB	866	118	748	0.1578
Malawi	105	13	92	0.1413
Lebanon	506	62	444	0.1396
Pakistan	1685	205	1,480	0.1385
Hungary	4796	446	4,350	0.1025

Source: Authors.

Appendix 3. Developed Scripts

Several scripts were developed to extract and clean data. To extract data, a script was developed to download Indiegogo's campaign information. This script, which has 134 lines, extracts ID, title, tagline, category, country, city, and creation and ending date. It was executed in May 2016 to download the whole campaign universe, and information about 850,000 campaigns was obtained.

To clean the database, the following scripts were developed:

1. Classify campaigns according to category or country (developed in Matlab).
2. Establish the experience of campaign owners (developed in Matlab).
3. Identify campaigns with validated Facebook accounts and calculate the size of their Facebook networks (developed in Matlab).
4. Calculate the number of words in the campaign title and tagline (developed in Matlab).
5. Merge big Excel files (developed in R).
6. Identify selected countries and extract their information.