

# Crowdfunding

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## Material Incentives and Performance

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## Abstract

This study addresses a new way to pool financial resources through an open call on the internet – crowdfunding. As this new industry continues to grow and develop, it is important to evaluate its current status and recent developments to try to find clues about the future.

The analysis conducted focused on the types of material incentives that crowdfunding platforms use to entice their users to invest and, more specifically, on the relationship between the types of incentives (equity, revenue shares, prizes, interests and donations - no incentives) and the total money raised by the platforms.

Findings indicate that the type of incentive used by a crowdfunding platform has a significant impact on the amount of money it raises. Additionally, the most used type of incentive, prizes, is outperformed by other types of incentive in terms of total money raised. Consequently, and also considering recent developments such as the passing of legislation in the United States regarding crowdfunding, evidence suggests that crowdfunding could become an important alternative source of financing for startups and small companies.

It is important for both investors and capital seekers to learn about the viability of crowdfunding as an alternative that allows both parts to generate significant income – or “for-profit crowdfunding”.

**Keywords: Crowdfunding; Incentives; Web 2.0; Bootstrap Finance**

## Preface

As a Business Administration student, I have a particular interest in the areas of Strategic Management, Innovation Management and Entrepreneurship. To choose a topic for my thesis that could encompass all of these areas was a natural choice for me.

Having previously studied these subjects with Professor Andrei Villarroel, I felt compelled to join his dissertation seminar *New Business Models for Online Distributed Organization*.

After exploring some possibilities, I decided to focus my research on crowdfunding. A relatively new phenomenon and one I deeply believe will enable the creation of a new wave of sustainable business projects. I was also inspired by what was already accomplished in related fields (i.e.: crowdsourcing, crowdlabor) and by the opportunity to explore a field that is still emergent as it is promising.

My hope is that this study will add to what we know regarding this subject.

## Acknowledgments

I want to thank a few people for the opportunity to write this thesis and for helping me through this challenging process. I will start by thanking Professor Andrei Villarroel for inspiring in me curiosity for these subjects, for all his time, help and mentorship throughout this project.

I'm also grateful to my parents for the opportunity to get a Masters degree and to all my friends and colleagues for their help and support. I would like to single out the colleagues from the "New Business Models for Online Distributed Organization" research seminar. Particularly, I would like to thank Diogo Onofre and Sofia Santos, with whom we worked on this seminar topic and who helped me immensely in the process.

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## I- Introduction

This study focuses on a funding alternative that involves pooling financial resources through an open call in the Internet. This alternative is called crowdfunding. It capitalizes on technological progress to deliver a solution that empowers crowds, by providing them the tools to join efforts and make an impact in society. Crowdfunding is still a very recent phenomenon, which is rapidly growing in importance. To illustrate this, one can observe the record breaking and successful fundraising campaign for the 2008 United States Presidential Election by President Barack Obama. President Obama's campaign relied heavily on a large amount of small individual contributions by average citizens in its fundraising effort<sup>1</sup>. In other words, crowdfunding was instrumental in this historic campaign.

There is still a lot to be discovered in the field of crowdfunding. This study addresses the question of the relative importance and success at fund raising of different crowdfunding mechanisms. It explores the relationship between what the investors give (i.e.: their money) and what they receive in return for their contributions (i.e.: material incentives). A better understanding of these dynamics should provide clues regarding the future of the industry.

More specifically, the viability of the “for-profit” crowdfunding alternatives is addressed in this work. The need for a funding alternative for startups and small businesses was studied, as well as a possible way to solve this problem: through crowdfunding platforms that reward their investors with equity/revenue shares or interests, two of the incentive types considered.

Regarding structure, this paper is divided in five main sections. The first part is a brief overview of the existing literature related to the topic, which is followed by an explanation of the research methodology followed. Then, two sections address the main findings (“Results”) and their implications (“Discussion and Conclusions”). Finally, the last section is dedicated to the main limitations of the study and some possibilities of future research.

Overall, the goal of this study was to shed more light into this online phenomenon - crowdfunding – that is still largely unknown and new and, in the process, test the viability of different crowdfunding mechanisms to finance projects, startups and small businesses.

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<sup>1</sup> 91% of the total receipts of the campaign (FEC 2008)

## II- Literature Review

### 2.1) The Knowledge Distribution in Society

A firm, as defined by Ronald Coase in 1937's *The Nature of the Firm* (Coase 1937), is a “*cluster of resources and agents that interact through managerial command systems rather than markets*”(Benkler 2002: 372). For Coase, what justified the existence of firms, as well as their boundaries, were the costs associated with coordinating economic activity in markets. These costs, such as the cost of enforcing property rights, were classified as “transaction costs”. (Benkler 2002)

Friedrich A. Hayek stated that knowledge “*never exists in a concentrated or integrated form*”; it is rather dispersed in society. He argued that the fundamental economic problem is figuring out how to secure that knowledge. (Hayek 1945: 519)

Hayek suggests that centralized models of organization are less efficient because they are not able to incorporate significant pieces of information that are dispersed. Eric von Hippel has added that knowledge is “*not only distributed but also «sticky», that is, relatively difficult and extremely costly to move between locations*”(Lakhani & Panetta 2007: 97; Von Hippel 2005: 11).

### 2.2) Web 2.0

Tim O'Reilly defined Web 2.0 as “*the network as platform, spanning all connected devices; Web 2.0 applications are those that make the most of the intrinsic advantages of that platform: delivering software as a continually-updated service that gets better the more people use it, consuming and remixing data from multiple sources, including individual users, while providing their own data and services in a form that allows remixing by others, creating network effects through an «architecture of participation,» and going beyond the page metaphor of Web 1.0 to deliver rich user experiences*”(O'Reilly 2007: 17).

Web 2.0 uses user-friendly interfaces and increasing speed in internet connections to boost the generation of content by users for an increasingly interactive experience. Web 2.0 breaks with the traditional sender-receiver model by enabling new forms of interactive communication (Kleemann & Voß 2008). It allows individuals from all around the World to share a common

environment where they can independently exchange opinions in a decentralized way and in real time. It also enables the aggregation of “*disparate flows of ideas in one stream*”(Brabham 2008: 81). These four characteristics (i.e.: diversity of opinion, independence, decentralization and aggregation of the crowd) constitute the four necessary conditions for crowd wisdom (Surowiecki 2010). Therefore, the web is a tool to gather collective intelligence (O’Reilly 2007).

In 1945, Hayek identified a “*need for a process by which knowledge is constantly communicated and acquired*” (Hayek 1945: 530). Today one can say that web 2.0 has enabled this process and opened a new window of opportunity and challenge for modern firms.

Going back to Coase’s notion that the firm’s existence and its boundaries are justified by transaction costs (Coase 1937), one can now further elaborate that the new potentialities of the web (e.g. broad band connections), its widespread adoption by a vast number of individuals, and the low and decreasing costs associated with its usage are significantly reducing the transaction costs and justifying the appearance of new solutions that make use of markets to coordinate economic activities and tap into the crowds. In fact, completely decentralized models of peer production have proven to be successful in open-source software development (Benkler 2002).

Furthermore, when it relates to information production, “*peer production has a systematic advantage over markets and firms*” (Benkler 2002: 444).

### 2.3) Crowdsourcing

In 2006, Jeff Howe and Mark Robinson studied the new business model that tapped into the crowds and gathered contributions from a distributed network of individuals using the power of the web to produce an open call. Howe called this model crowdsourcing and provided the following definition:

*“Simply defined, crowdsourcing represents the act of a company or institution taking a function once performed by employees and outsourcing it to an undefined (and generally large) network of people in the form of an open call. This can take the form of peer-production (when the job is performed collaboratively), but is also often undertaken by sole individuals. The crucial prerequisite is the use of the open call format and the large network of potential laborers.”*  
(Howe 2006)

A key element in this definition of crowdsourcing is the notion of a firm outsourcing specific tasks to the crowds. Academic researchers have since sought to integrate the emergent concept of “crowdsourcing” into the existing theory of organization (Villarroel 2008; Brabham 2008; Van den Ende, Villarroel and Tucci 2009; Malone, Laubacher and Dellarocas 2010; Villarroel and Gorbatai 2011a). Crowdfunding is an evolution of this concept involving monetary resources, which brings an additional element to the ongoing academic debate on the need for a theory of online distributed organization (Villarroel and Gorbatai 2011b).

Furthermore, others have built on this base and added that the individuals in the crowd do contribute to the firm’s production process *“for free or for significantly less than that contribution is worth to the firm”* (Kleemann & Voß 2008: 6). This, among other factors, explains the strategic value of tapping into the crowds for the modern company (Villarroel 2011).

## 2.4) Crowdfunding

The concept of crowdfunding is relatively new and, therefore, there is still little literature on the subject. Lambert and Schwienbacher were among the first to provide a definition for crowdfunding. They stated that *“Crowdfunding involves an open call, essentially through the internet, for the provision of financial resources either in the form of donation or in exchange for some form of reward and/or voting rights in order to support initiatives for specific purposes”* (Lambert & Schwienbacher 2010: 6).

This definition basically builds on a previous characterization of Crowdsourcing (Kleemann & Voß 2008) adding one specificity : the crowd contribution to the firm’s production process in this case is done by providing the financial resources required for the execution of a project.

Other authors have identified traits that characterize crowdfunding. One of these particularities is that it is centered in customers, in the sense that they provide not only the financial resources, but also a personal support that enable the success of a certain project (Ordanini et al. 2011). Personal support essentially means that one person believes in the project and acts accordingly, it is a positive reinforcement. It can be used, for example, to determine the success chances of a certain idea or project before the commitment of significant financial resources, thus reassuring a third

party (e.g.: a bank) and effectively reducing risks significantly. A typical example of this phenomenon is the pre-sale of goods through crowdfunding platforms such as Kickstarter<sup>2</sup>.

Besides the product itself (pre-sale), crowdfunders are being compensated through cash (interests), stocks, bonds, prizes or a share of the project's revenue. In some cases they might be given voting rights or be publicly recognized through leader boards or virtual badges inside the community. Crowdfunders may also contribute without the expectation of compensation, most frequently to charity platforms/projects. (Lambert & Schwienbacher 2010)

Although the term crowdfunding is relatively new and directly linked to the web (i.e.: web 2.0) the concept of gathering small amounts of money from a large pool of contributors has a long precedent in areas such as charity and political campaigns (Ordanini et al. 2011). The renowned 18<sup>th</sup> century composer Wolfgang A. Mozart, for instance, financed his work through advanced subscriptions (Hemer 2011). On this topic Jeff Howe, the “father” of crowdsourcing has stated: *“Crowdfunding isn't new. It's been the backbone of the American political system since politicians started kissing babies. The Internet so accelerates and simplifies the process of finding large pools of potential funders that crowdfunding has spread into the most unexpected nooks and crannies of our culture”* (Howe 2008: 7).

## 2.5) Convergence Culture and the New Customer

Marketing literature has investigated the role of customers in production for a long time<sup>3</sup>. Service marketing theory has explored the potential benefits of a greater customer involvement in the production process (Bendapudi & Leone 2003). However, it is mostly the case that the individuals participating are the potential customers of the service. This is not necessarily the case in crowdfunding (Ordanini et al. 2011).

This literature helps us understand the benefits associated with a greater knowledge of the market needs that result from a dialogue between firms and customers. Another important contribution was provided by Eric von Hippel with the concept of “lead users”. He defined them as *“users whose present strong needs will become general in a market-place months or years in the future”* (v.Hippel 1986: 791). These users can be an important tool for a firm looking to develop new

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<sup>2</sup> Appendix 1 – Kickstarter project

<sup>3</sup> For a chronological review of the literature on customer participation in production see (Bendapudi & Leone 2003)

products, providing valuable insight, or they can themselves participate in the creation of new products by either financing them or soliciting others to do it, for example.

The service-dominant logic in marketing has contradicted the more traditional, more resource-centric view of economic transactions. As a consequence of the value of a product being subjective, the customer can be seen as a co-creator of value (Lusch et al. 2007). Thus, it makes sense to increase the customer's involvement in the production process.

In fact, the relationship between customers and producers is becoming more complex and evolving from the traditional top-down and one-way process; moreover it is becoming an interaction<sup>4</sup>. Henry Jenkins has studied this “convergence”:

*“Convergence represents a paradigm shift – a move from medium-specific content toward content that flows across multiple media channels, toward the increased interdependence of communication systems, toward multiple ways of accessing media content, and toward ever more complex relations between top-down corporate media and bottom-up participatory culture”* (Jenkins 2006: 243)

Studies have shown that by surrendering control to customers, companies enhance their engagement and build brand equity (Schau et al. 2009). Therefore, customer participation can at times be solicited and/or enabled at a low cost and, as a result, yield higher commitment levels by these individuals, ultimately creating value for a given company.

## 2.6) Bootstrap Finance & Crowdfunding

One of the areas where crowdfunding can make a difference is in helping entrepreneurs satisfy their startups' early financing needs. Some authors have studied seed funding and have concluded that there is a gap in this area:

*“(...) there is growing evidence that the focus and interest of venture capital is moving beyond early stage innovative start-up firms to later-stage investments. This shift in focus has created a significant ‘funding gap’ for early stage start-up ventures and has renewed both academic and practitioner interest in possible methods of promoting the aggregated pool of available capital to*

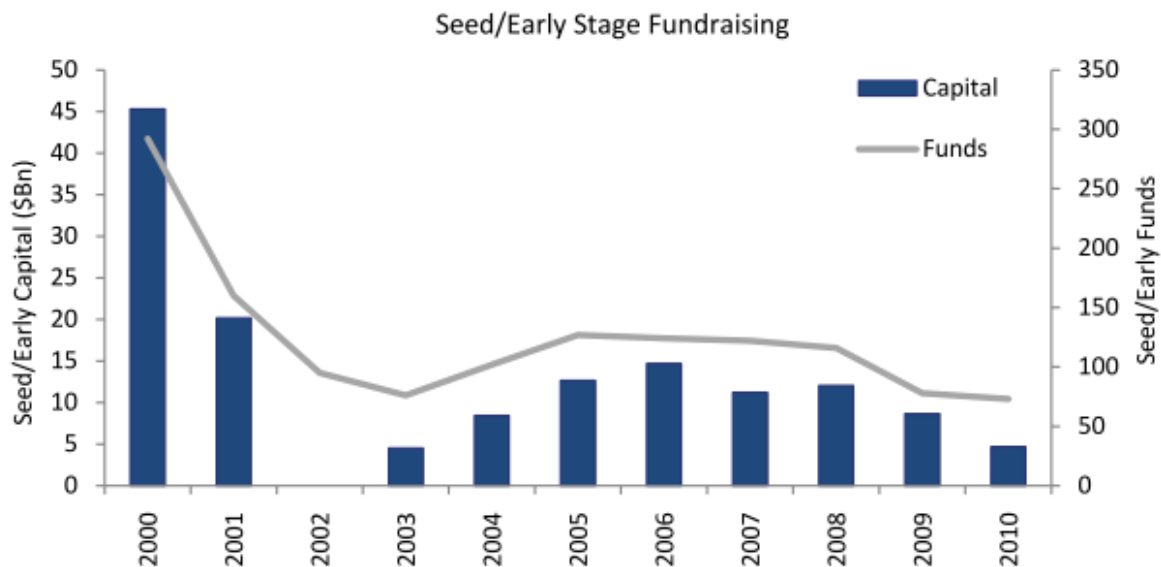
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<sup>4</sup> Appendix 2 – “The emerging role of consumers as investors”

*early stage start-up enterprises that are pre-revenue and yet to reach commercialization stages”* (Ley & Weaven 2011: 85)

A recent study has shown that the amount of seed and early stage capital raised has been decreasing for the last ten years. On 2010 this volume decreased 46% from the year before, more than doubling the total reduction for all venture capital funding (21% decrease). Although the global macroeconomic conditions explain the reduction of the funds raised in venture capital, they do not explain why seed and early stage capital are being more penalized. Figure 1 shows us the evolution of seed and early stage fundraising. One can see that the amount of capital being invested in these stages is diminishing as well as the number of funds operating in this segment (Poston et al. 2011).

**Figure 1 - Annual Evolution of Seed/Early Stage Fundraising**



Source: Thomson One as of December 31, 2010

Includes fundraising by U.S. venture capital and venture capital-type investors (funds with limited partners)

It is suggested that if crowdfunding can effectively help close the current gap in early stage seed funding, it could have a major impact on the World economy, as currently most of the five hundred fastest growing companies in the US (Inc. 500 list) used bootstrapping<sup>5</sup> to satisfy their initial financial needs (Bhidè 1992).

<sup>5</sup> Bootstrapping - “consists of using alternative financing ways than the traditional sources of external finance (e.g., bank loan, angel capital and venture capital)” (Lambert & Schwiendacher 2010: 7)

Some startups have trouble raising funds from traditional sources like banks because their business model is unique and it is difficult to measure their potential. However, having a crowd of investors pledging money to a certain startup can help the entrepreneur make a case that it is viable and has a market. Besides the financial support, there is also a very important signaling effect – the people investing, albeit small amounts of cash, believe in that project (Hemer 2011).

Initially, entrepreneurs may be required to spend a lot of time and energy trying to finance their startups without any assurance of success in this particular endeavor. Michael Lutz, an entrepreneur and former CEO of GammaLink.Inc has stated that *“raising money has become a disease. Entrepreneurs are wasting lots of brainpower scheming to raise money”*(Bhidè 1992: 110). Lutz and his partner, Hank Magnuski, both came up with \$12.500 each to start the company after a year of unsuccessfully trying to attract venture capital. Some years after, they were successful in obtaining \$800.000 in venture capital (Bhidè 1992), and ended up selling the company to Dialogic Corporation<sup>6</sup>.

## 2.7) Research Hypothesis

There are hundreds of crowdfunding platforms currently online. These platforms use a variety of incentives to attract their users to invest in the projects they host. Four major types of incentives handed out by platforms were identified: equity, revenue shares, interests and prizes. There are also platforms that don't hand out any incentive (donation based).

This study considers the evolution of crowdfunding and the data collected about the current state of the industry

**H1: The type of incentives that a crowdfunding platform uses to convince users to invest has a significant impact on its performance<sup>7</sup>.**

The first hypothesis tested was that the type of incentive that a platform gives to its investors has an impact on the total money raised by that platform. It makes sense that the users of a given platform feel compelled to invest in a project because of the material incentive they are rewarded with. In practice, it is substantially different to receive a personalized t-shirt or shares in a

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<sup>6</sup> <http://en.wikipedia.org/wiki/GammaLink>

<sup>7</sup> Performance measured as “total money raised” by the platforms

promising startup. The point of this analysis is to find statistical evidence of the prominence of one type of incentive over the others. Different incentives may attract different types of investors, what we want to know in this instance is if by offering a particular incentive, a crowdfunding platform is more likely to raise larger sums of money.

**H1.a: Platforms that use *prizes* as an incentive to entice investors will outperform the ones that don't.**

Given that *prizes* are currently the most popular type of incentive (i.e.: most used by platform) it is hypothesized that it outperforms the other types of incentives.

**H2: There is an untapped market for crowdfunding platforms that reward their investors with the opportunity to make money through their investments.**

Finally, this study looks into the potential of crowdfunding to become an important source of revenue for its users. Currently, most users invest in crowdfunding because they want to support a particular project and/or for fun, but not necessarily to make considerable financial gains. I will try to find evidence that there is an untapped need for funding that can be satisfied through crowdfunding that the legislation is moving towards allowing these tools to become an effective solution and that users would be willing to invest in such terms. It is hypothesized that for-profit crowdfunding is underdeveloped and that there is potential for growth in this particular area.

### III- Methodology

Thomas Malone's *The Collective Intelligence Genome* was a significant inspiration for our work (Malone et al. 2010) and the related work that Professor Villarroel had developed while working with Professor Malone at the MIT Center for Collective Intelligence. Particularly, we received a template of the taxonomy of crowdsourcing from Professor Villarroel and worked in a team to characterize crowdfunding platforms using building blocks we identified by surfing through these platforms and by analyzing the existing literature. After this collaborative step to compile a complete database of crowdfunding platforms, I focused on the incentive schemes that the platforms were using and how they were related to their performance.

A list of three hundred and ninety crowdfunding platforms was compiled in total. However, some platforms were dropped from the analysis. The platforms included satisfied the following criteria:

- They were active at the time of the analysis [“alive”]
- They started operating before 2012 [“years active>0”]
- The information regarding the total money they raised was available
- They used only one of the five types of incentives [“specialized platforms”]

We started by adding the platforms listed in the *crowdsourcing.org* website<sup>8</sup>. There were some platforms that weren't listed in this website that we added. Some were referred to us by friends, colleagues and professors, others we simply came across when reading articles about crowdfunding. Our first sample had four hundred and fifty one platforms. Some websites were incorrectly listed as crowdfunding platforms (e.g.: Moodle) and were removed from our database. After all changes, we ended up with 390 platforms (n=390).

We found most of the information we needed about the characteristics of the platforms on their websites (i.e.: FAQ, About, Terms of Use), on *alexa.com* (i.e.: traffic rank and other web metrics) and on their Facebook pages (i.e.: number of fans). Additionally, we contacted each one of the platforms individually, by e-mail or through a contact form available on their website, to solicit information.

- All the platforms that started operating in 2012 were not considered because a significant portion had only a few months of activity and had no measurable success. If they were included, it would distort the results and create a bias. This concerned twenty two platforms created in 2012.
- All the platforms that weren't operating at the time of the information collection weren't considered as well. Some of them had notices on their website warning their former users that they were no longer active. Platforms where no activity could be detected, either on their website or on their Facebook page, were also deemed “inactive” or “dead”. Fifty four “dead” platforms were excluded.
- All the platforms for which there wasn't any information regarding *total money raised* were excluded from the analysis. Some platforms declined the request due to privacy or strategic concerns.

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<sup>8</sup> [www.crowdsourcing.org](http://www.crowdsourcing.org)

In the end, there was complete information for a subset of eighty platforms.

### 3.1) Variables

Table 1 summarizes the list of variables included in the analysis.

**Table 1 - Variables Summary**

Independent	Dependent
Iprizes <sup>1</sup>	Total Money Raised
Idonations <sup>1</sup>	<b>Control</b>
Ilending <sup>1</sup>	Years Active
Iequitysharing <sup>1</sup>	Notoriety Index

1. dummy variables

#### 3.2.1) Dependent Variable – Total Money Raised

The performance metric used is the total money that a platform raised since its inception in US Dollars. This is the total amount that was effectively and permanently transferred from investors to the project owners (users that are raising money). Some platforms use the “all-or-nothing” model. This means that if a certain project doesn’t fulfill a predetermined funding goal by a given deadline, than the platform pulls back the funds that were pledged to that project and refunds the investors. Therefore, this kind of monetary commitment from the investor doesn’t add up to the total money raised number of the platform, at least not until the money is transferred without possibility of a refund. In short, this metric measures the effective amount of money raised, and not the money pledged.

This information (*total money raised*) is important because it illustrates the volume of transactions that were intermediated by a crowdfunding platform. It is a performance measure that one can use in all types of platforms.

The total money raised by each platform is expressed in US Dollars. Whenever the available number was expressed in any other currency, it was converted to US Dollars.

### 3.2.2) Independent Variables – Types of Incentives

Project owners use different incentives to entice people to invest on their projects. Typically, what they can offer depends on the rules of the platform they choose to host their project(s). Therefore, different crowdfunding platforms specialize in different types of incentive schemes. Most use only one type of incentives; however, there are platforms that combine two. An example of this is the platform *Apps Funder*<sup>9</sup>. After thoroughly studying three hundred and ninety crowdfunding platforms, four major types of incentive schemes to attract investors were identified: prizes, interests, revenue shares/equity and donations (no incentives). All of the platforms were classified according to these criteria using dummy variables.

In order to perform the analysis, four dummy variables were created identifying the platforms that used one, and only one, particular type of incentive (e.g.: *iprize* = platform that only uses prizes to reward investors). As a result, four mutually exclusive variables identify platforms that used only one of the following incentives: prizes, interests, revenue shares/equity and donations; *iprizes*, *ilending*, *irevenuesharing*, *iequity* and *idonations*, respectively.<sup>10</sup>

*Equity* and *revenue sharing* were bundled together for this analysis. The rationale here being that both were long term commitments to a project from the investor and they might be perceived in a similar manner by them. The main goal of using this bundle was to see if it was possible to achieve more powerful results (while still solid) with a simplification of the data set. It was a way to test if the chosen variables were the most adequate ones.

**Table 2 - Independent Variables\***

<p style="text-align: center;"> <i>iprizes</i>  <i>idonations</i>  <i>ilending</i>  <i>iequitysharing</i> </p>
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\*all dummy variables

<sup>9</sup>Appendix 3 – Example of Platform with Multiple Incentive Schemes (*Apps Funder*)

<sup>10</sup> The platforms that used more than one type of incentive were not considered in the analysis. Fifty one platforms used more than one of the five incentives.

## Prizes

Some crowdfunding platforms enable the project owners to offer prizes to their investors. The most common practice is for project owners to offer a product related to the project, the output. For example, some platforms allow music artists to offer their CD's in return of financial contributions that enable the artist to record it. There is a wide range of prizes that can be offered to lure in investors such as T-shirts, pins and limited edition products. The variable analyzed (*iprizes*) included all the platforms that only use prizes as an incentive. This variable was set as a baseline and consequently dropped from the computed regressions to prevent collinearity (see “Data Analysis” for a more complete explanation).

Example: *Indiegogo*<sup>11</sup>

## Interests

Various platforms offer project owners the opportunity of rewarding investors with interests. In a process that is very similar to a regular loan, the project owner (borrower) reimburses the money to the investor (lender) after a certain and pre-determined period of time. He adds to this value a fee (interest) that usually depends on the risk of the investment, the inflation rate and the time value of money<sup>12</sup>. The variable analyzed (*ilending*) included all the platforms that only use interests as an incentive.

Example: *Rate Setter*<sup>13</sup>

## Equity and Revenue Sharing

This variable is a result of the bundle of the *equity* and the *revenue sharing* variables. It includes platforms that only use either equity or revenue shares as an incentive, never both. Therefore, for the new set of four incentives, the independent variables remain mutually exclusive. The variable analyzed (*iequitysharing*) integrated all the platforms that only use either equity or revenue shares as an incentive.

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<sup>11</sup> Appendix 4 – Example of a *Prizes* Platform (Indiegogo)

<sup>12</sup> <http://www.investorwords.com/2531/interest.html>

<sup>13</sup> Appendix 5 – Example of an *Interests* Platform (Rate Setter)

## Equity

Crowdfunding platforms that use an equity incentive scheme enable the project owners that utilize them to reward investors with a fraction of the company or the project they supported. The idea being that, if the project is successful, they can sell their participation or even collect dividends in the future and make a profit.

Example: *ASSOB*<sup>14</sup>

## Revenue Share

Several platforms allow project owners to compensate their investors with a percentage of their future sales. For example: an investor funds part of the production of five thousand t-shirts and gets a percentage of the revenues resulting in the sale of the t-shirt in the marketplace.

Example: *Appbackr*<sup>15</sup>

## Donations

There are several crowdfunding platforms that don't award their investors material or measurable incentives. The motivations for investing in these platforms are mainly intrinsic (e.g.: satisfaction for helping a cause), since investors don't get back any material reward for their investment. This setup is prevalent in platforms that raise money for charity organizations and/or projects. For this study, these platforms were labeled *donation-based platforms*. Some of them use social tools to reward investors, by recognizing publicly their efforts to help a certain cause. This type of social validation can be an important incentive to invest. The two most common ways to recognize the investor's efforts are leader boards and badge systems. Leader boards rank the top investors in a certain platform and badge systems reward investors for various achievements (e.g.: raised more than x\$, contributed to more than x projects, etc...). Investors may feel pressured to contribute more in order to improve their status/position within the community, particularly if their donations are not anonymous. However, there are also platforms that rely solely on the investors'

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<sup>14</sup> Appendix 6 – Example of an *Equity* Platform (*ASSOB*)

<sup>15</sup> Appendix 7 – Example of a *Revenue Share* Platform (*Appbackr*)

will to “do the right thing”. In these instances, the project in itself is the only way to compensate the investor. Investors will feel compelled to contribute only if they really believe in the outcome of the project or in the merit of the cause. The variable analyzed (*idonations*) included all the platforms that never hand out any type of incentive. Not included are, for example, platforms that have some projects that use incentives and others that only accept donations.

Example: *First Giving*<sup>16</sup>

### 3.2.3) Control Variables

#### **Years Active**

One of the controls implemented in the analysis was the control for years active. Platforms that operate for longer periods of time naturally have a higher probability of collecting a larger sum of money. Therefore, this variable was controlled for.

#### **Notoriety Index**

The second control variable added to the analysis was the notoriety index (Alexa). The notoriety index is computed by Alexa Internet by summing the number of links to a particular website “from sites visited by users in the Alexa traffic panel”<sup>17</sup>. Links from the same website are only counted once. This information is updated monthly and it’s available in [www.alexa.com](http://www.alexa.com). Alexa Internet is a subsidiary company of *Amazon.com* that produces reports about global web traffic since 1996<sup>18</sup>.

The amount of links to a platform can have a significant impact on the total amount of money that a platform raises, so that was controlled for.

## 3.2) Data Analysis

The data analysis was performed using STATA 12, a statistical software package.

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<sup>16</sup> Appendix 8 – Example of a *Donations* Platform (First Giving)

<sup>17</sup> Description available in [www.alexa.com](http://www.alexa.com)

<sup>18</sup> [http://en.wikipedia.org/wiki/Alexa\\_Internet](http://en.wikipedia.org/wiki/Alexa_Internet)

Mutually exclusive independent variables that expressed the different types of incentive schemes were used in the analysis (see Table 2). The practical implication of this being that the platforms that used more than one type of incentive were excluded (e.g.: a platform that uses interests and prizes). *Iprizes* was chosen as a baseline variable in the analysis performed. This variable was picked because most crowdfunding platforms use prizes (see Table 4), particularly most of the new platforms (see Figure 3). For this reason, we chose the variable *iprizes* as the basis for comparison with the other types.

An OLS regression<sup>19</sup> of the logarithm of the dependent variable (*i.e.*: *total money raised*) was used for this analysis. The distribution of the logarithm of the dependent variable approximates a normal distribution, hence the choice of the regression.

## IV- Results

### 4.1) Overview

The table below (Table 3) contains a summary of the complete dataset (n=390). It is useful to understand some of the main trends and characteristics of the general sample, as well as some possible limitations of this study.

**Table 3 - Complete Dataset Summary (N=390)**

Incentive	N	Alive %	Years Active>0 %	Total Money Raised %	Specialized Platforms %
<b>Donations</b>	118	89.8%	94.1%	32.2%	99.2%
<b>Interests</b>	49	95.9%	95.9%	51.0%	83.7%
<b>Revenue Share</b>	24	91.7%	95.8%	37.5%	50.0%
<b>Equity</b>	37	89.2%	94.6%	37.8%	64.9%
<b>Prizes</b>	164	90.2%	90.2%	21.3%	88.4%
<b>Total</b>		91.3%	93.1%	29.5%	86.9%

In this table, prizes are the most popular form of incentive in crowdfunding platforms (n=164). Donation platforms are also significantly popular (n=118). It is also interesting to see that donation platforms are very specialized (99.2%); they don't use any type of material incentive to

<sup>19</sup> See more information on the regression on Appendix 11 - Detailed Statistical Analysis

attract investors. In contrast, half of the platforms that use revenue sharing utilize other types of incentives as well. Most of the identified platforms have been active for more than a year and were operating when the analysis was performed (93.1% and 91.3% respectively). Unfortunately, some platforms didn't divulge the total amount they had raised since their inception. Only 29.5% of the platforms disclosed this information. This is a source of concern addressed in the "limitations" part of this thesis.

The application of the above listed criteria resulted in a sample used to analyze performance (per incentive type) measured as *total money raised* (n=80). One can observe that the sample is significantly smaller than the complete dataset, due to a considerable amount of platforms' choice not to reveal the total amount of money they had raised. We can see that only a small percentage of *prizes* platforms (16%) were included in this sample. The issue of low reporting by *prizes* platforms will also be discussed in "limitations".

**Table 4 - Sample Information**

Incentive <sup>1</sup>	N	Total Money Raised %
<b>Donations</b>	105 <sup>2</sup>	30%
<b>Interests</b>	37	57%
<b>Revenue Share</b>	10	30%
<b>Equity</b>	21	38%
<b>Prizes</b>	115	16%
<b>Total</b>	288 <sup>2</sup>	28%

Years Active>0, Status: Alive

1.variables are mutually exclusive

2.the notoriety index isn't available for two of the platforms

Table 5 shows the total money raised by platforms aggregated by type of incentive, the total money raised per year active of those platform types and the average money raised by year active<sup>20</sup> (for each platform). The results show that *donations* platforms raise more money overall, per year active and on average per year active. Although the most popular type of incentive is *prizes* (115 platforms), the platforms that use this type of incentive raise, in average, less money per year active than the *interests*, *donations* and *equity* platforms (\$3.187.128 vs. \$15.013.694, \$14.686.874, and \$6.060.803 respectively).

<sup>20</sup>average money raised by year active =  $\frac{\sum \text{Money raised per year active of each platform}}{\text{Number of platforms}}$

**Table 5 - Total Money Raised by Incentive Type (USD)**

Incentive <sup>1</sup>	N	Sum Total Money Raised	Total Money Raised/Year <sup>2</sup>	Total Money Raised/Year/Platform
Interests	21	1 843 444 055	315 287 580	15 013 694
Donations	31	3 333 369 716	455 293 085	14 686 874
Equity	8	188 102 603	48 486 420	6 060 803
Prizes	17	156 848 620	54 181 173	3 187 128
Revenue Share	3	9 577 634	4 983 634	1 661 211
<b>Total</b>	80	5 531 342 628		

Years Active&gt;0, Status: Alive, Total Money Raised&gt;0

1. variables are mutually exclusive

2. sum of total money raised per year active of each platform

Regarding notoriety (measured with *alexa.com*'s *notoriety index*), the platforms that don't give material incentives to investors (i.e.: *donations*) have the highest average notoriety. There are some possible explanations for the fact that *donations* platforms have the highest average notoriety (946).

Most of the first crowdfunding platforms were created for charity purposes and used the *donations* model. In addition, the projects hosted by this type of platforms tend to be more "popular" by nature. That is, a charity cause hosted by a *donations* platform is more likely to garner widespread public attention than a "for-profit" small business project.

**Table 6 - Notoriety by Incentive Type**

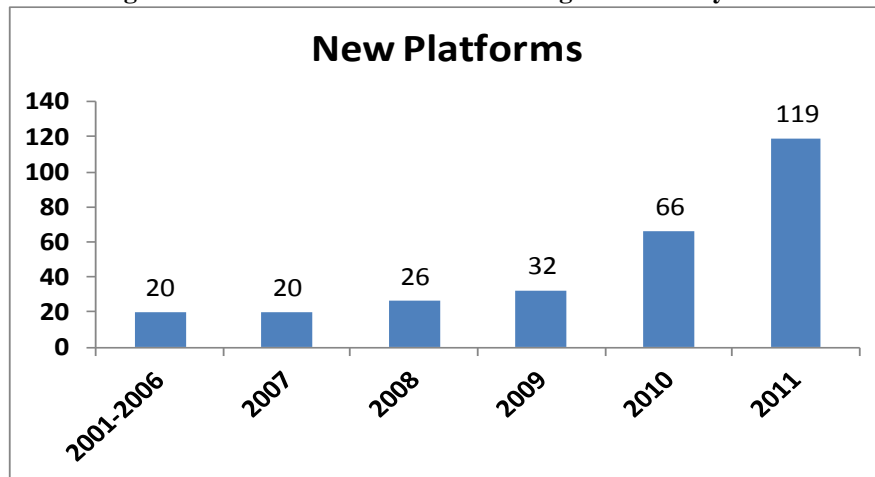
Incentive <sup>1</sup>	N	Sum Notoriety Index	Average Notoriety Index
Donations	103	97 468	946
Interests	37	30 069	813
Prizes	115	81 368	708
Equity	21	4248	202
Revenue Share	10	1101	110
<b>Total</b>	286	214254	

Years Active&gt;0, Status: Alive, Notoriety Index&gt;0

1. variables are mutually exclusive

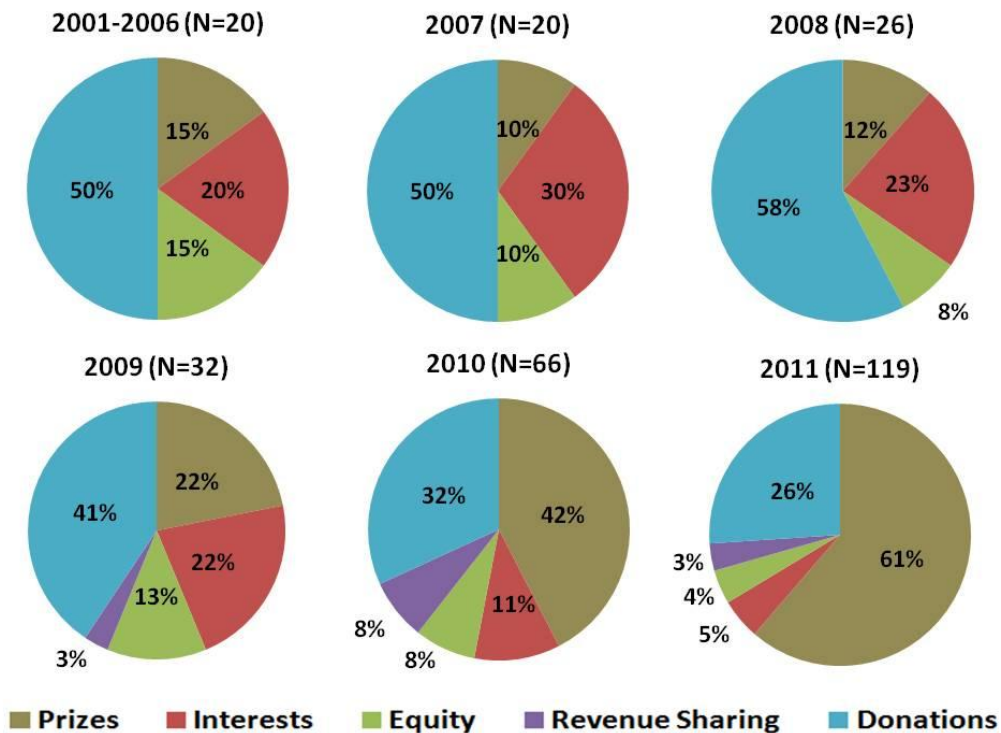
The amount of new platforms being launched every year has been consistently increasing for the past few years (Figure 2). Crowdfunding is a very recent phenomenon and, as one can see, this phenomenon only started to gain momentum as recently as 2007. Numbers show (Figure 2) that in 2007 alone, the number of new platforms launched equaled the amount of the six previous years (2001-2006) combined – twenty platforms.

Figure 2 - Number of New Crowdfunding Platforms by Year



By looking at the yearly distribution of new platforms by type of incentive (Figure 3) one can see that *prizes* has become the most popular type of incentive for new platforms in the past two years (2010 and 2011). Prior to 2010, most of the platforms didn't provide any material incentive to their investors (i.e.: strict *donations* model).

Figure 3 - New Platforms by Incentive Type (Year)



## 4.2) Types of Incentives and Performance

To evaluate the impact of the chosen incentives in a platform's performance, a set of four regression models was created (table 7)<sup>21</sup>. *Total money raised* was utilized as the dependent variable for all models; it was used throughout this work as a measure of performance for crowdfunding platforms. *Model 1* includes only the independent variables. The two control variables were first added individually and separately (*models 2 and 3*). Finally, *model 4* includes both control variables as well as the independent variables.

The results of the last model (*model 4*) indicate that all incentive models outperform *iprizes* (the baseline for this analysis). *Ilending* has the largest impact, 2.192 ( $p < 0.01$ ), followed by *iequitysharing*, 2.007 ( $p < 0.05$ ). *Idonations* also had a statistically significant impact ( $p < 0.1$ ) of 1.499.

**Table 7 - Impact of Incentives in Total Money Raised**

Variables	Model 1	Model 2	Model 3	Model 4
Ilending	+++	+	+++	+++
lequitysharing	++	•	+++	++
Idonations	+++	•	+++	+
years active		+++		+++
notoriety index			+++	+++

+++ (positive impact  $p < 0.01$ ), ++ (positive impact  $p < 0.05$ ), + (positive impact  $p < 0.1$ )

• (impact is not statistically significant)

baseline: *iprizes*

See appendix 10

Currency: US Dollars

Additionally, results show that both control variables (*years active* and *notoriety index*) have a highly significant positive impact in *total money raised*. We can therefore conclude those platforms that have been active for more years and that have more websites linking to it tend to raise more money.

## V- Discussion and Conclusions

The results from the analysis indicate that the type of incentive that a platform chooses to entice users to invest in the projects it hosts has an impact on the total money raised by that platform.

<sup>21</sup> See Appendix 10 for a complete version of the results presented in Table 7

This confirms hypothesis H1. In Table 7 we can see that all types of incentives outperform *prizes* (the baseline) in terms of *total money raised*. The results are statistically significant<sup>22</sup>. Also, they contradict what was hypothesized in H1.a: that *Prizes* would outperform the other incentive types. Results prove that is not the case (see table 7). This is surprising considering that prizes is the most popular type of incentive (see Table 4) and most new platforms use this type of incentive (see Figure 3).

These results also show that platforms that use *equity*, *revenue sharing* or *interests* can be very successful in raising money, in fact, more so than *prizes* and *donations* platforms. This may be a consequence of the development of the industry. In the beginning, crowdfunding served mostly (and almost exclusively) as a fundraising tool for charity organizations, and they used a simple donation-based model. Now, we are seeing that *prizes* platforms are becoming increasingly popular as investors start to demand something back for their contribution but still don't look at crowdfunding as an important source of income. It is very difficult to accurately predict the future in this fast changing industry. Nevertheless, as investors demand more and legislation becomes more friendly, *equity*, *interests* and *revenue sharing* platforms will likely become more prominent, in line with what was hypothesized in H2.

There is still room to improve “for-profit” crowdfunding models. These results, that show that these platforms raise more money than others, report to a period prior to the approval of the JOBS Act<sup>23</sup>. Also, the bill is just the first legislative effort concerning crowdfunding. The *CrowdFunding Intermediary Regulatory Association* (CFIRA) was created by thirteen major crowdfunding platforms to work alongside the government to develop new regulations and some members of Congress have been working to push more ambitious goals. For example, Rep. Patrick McHenry, who has led the first attempt to pass a law about crowdfunding<sup>24</sup>, has openly criticized the provision of the JOBS Act that prohibits general solicitation. This provision forbids platforms to use external sites to promote their projects. On the other hand, the results on Table 7 show that notoriety (i.e.: the number of external links to the platform) is positively and significantly associated to the total amount of money it raises. So here we have an example of growth potential that is not yet realized.

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<sup>22</sup>Appendix 10 – Regression Results

<sup>23</sup>Appendix 9 – The JOBS Act

<sup>24</sup>*The Entrepreneur Access to Capital Act* (McHenry 2011)

Experts and people from the crowdfunding industry have also argued that banks are having trouble coping with the changes in the modern business environment. They have been cutting on lending to small businesses and startups because they often experience trouble assessing risks and end up not profiting a lot from this practice. More specifically, it is very difficult for regular banks to assess the chances of success of creative and innovative businesses (Avery 2012). However, with crowdfunding risks can be mitigated with the help of a crowd. The fact that a significant amount of people believe in a business to the point that they put their own “skin in the game”<sup>25</sup> is a powerful signal that it will do well in the market. By reducing uncertainty, crowdfunding can also help entrepreneurs finance their businesses at a lower cost (even if they choose to use bank loans on a later instance). Besides this, there are also efficiency gains to consider. Lending platforms operate online and can take advantage of smaller overheads to offer cheaper rates. Also, most use an auction system in which the lender that offers the lower rate gets the loan and the platform intermediates the process. Again, the potential in this area is immense.

Overall, the crowdfunding industry has been growing exponentially (see Figure 2). The amounts of projects, platforms and investors have all been growing and are expected to continue to do so for the coming years. Based on the results of the present analysis and on everything I’ve seen and read, I believe the next stage of the evolution of the industry will be centered on the “for-profit platforms” (H2). Meaning: the platforms that reward their investors with a real possibility of being compensated in the future, either by paying interests or by giving them a part of the company (i.e.: shares). Once that is accomplished, crowdfunding would have become a full-fledged alternative to traditional bank lending and a powerful tool for small businesses and startups.

As an additional step, the twenty platforms with most money raised per year active were considered. The previous analysis yielded insights regarding the landscape of crowdfunding. However, it is interesting to take a look at only the top performing platforms as well. Table 8 shows that half of the top twenty platforms use a donation model. A significant number of *interest* platforms are also present (i.e.:7).

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<sup>25</sup> i.e.: they invest in it

**Table 8 - Number of Platforms in Top 20<sup>1</sup>**

Rank	Incentive	# Platforms	% Platforms in Top 20 <sup>2</sup>
1	Donations	10	50%
2	Interests	7	35%
3	Prizes	2	10%
4	Equity	1	5%

Years Active&gt;1, Status: Alive, Total Money Raised&gt;0

1. Top 20 Platforms with highest total money raised per year active

2. % of platforms in the top 20 platforms that raise more money per year active

Almost all of the first crowdfunding platforms to be created used a donation model. However, on the last few years, other models have gained importance. 2009 was the first year where the majority of the crowdfunding platforms created were not *donation* platforms (see Figure 3). The technological progress of the last years has enabled a lot of people to buy, sell and invest in the internet (O'Reilly 2007). Crowdfunding has also been gaining popularity; creative projects have made the news and helped increase public awareness of the phenomenon. More people are able to participate (Benkler 2002) and more people know about this possibility. Data suggests that big projects have helped platforms in attracting more projects, users and funds. The scale of sites like Kickstarter has been increasing dramatically as of late and this is just another indicator of the growth potential of crowdfunding (Coldeway 2012).

A study by *Massolution*, a research firm that recently conducted a survey of the crowdfunding industry, shows that more than one million crowdfunding campaigns have yielded approximately \$1.5 billion dollars (US) in 2011 (Empson 2012). Also, equity-based platforms are performing particularly well, growing at a 114% rate and have also raised more money per campaign (Empson 2012).

Recently, governments have recognized the potential of crowdfunding by passing legislation to facilitate for profit crowdfunding<sup>26</sup>. Before, legislation either altogether prohibited or significantly conditioned for-profit crowdfunding, especially *equity* and *revenue sharing* models.

On November 2009, Michael Migliozi, a managing partner at an American ad agency, launched [www.buyabeercompany.com](http://www.buyabeercompany.com). Michael had seen in the news that Pabst Brewing Co. (PBR) was on sale and decided to launch a crowdfunding campaign to buy it. After just two months and \$210 million dollars (US) in pledges, Michael was contacted by the SEC and asked to depose. He

<sup>26</sup> Appendix 9 – The JOBS Act

was unsuccessful in his attempt to buy PBR and experienced some legal troubles in the process, but his story attracted the attention of others and eventually led to changes in the field of crowdfunding (Sacks 2012) (see Appendix 9).

The passing of the JOBS Act in the United States (see Appendix 9) can become a significant landmark for the industry of crowdfunding. This piece of legislation is the first to regulate crowdfunding in the United States, the country hosting 39% of the crowdfunding platforms identified, and the largest market in terms of investments in the industry (Empson 2012). The bill specifically aims at helping crowdfunding become an alternative for startups and small companies in the US, companies that have struggled to find financing as a consequence of the 2008 global financial crisis (see Figure 1). What this shows is that there is a need for an alternative financing method for businesses and that legislation is easing to allow crowdfunding models that use *equity* and *interests* to become that alternative. This in part supports H2.

It is likely that more legislation will be introduced in the next few years, if the industry continues to grow exponentially and the limitations of the current law are addressed. In the meantime, thirteen crowdfunding platforms created a self-regulatory body in the wake of the JOBS Act's approval (Avery 2012). The newly created CFIRA<sup>27</sup> will work with the government to establish best practices and industry standards (CFIRA 2012), in an effort to prevent fraud in crowdfunding and the consequent reputational damage for all platforms.

## VI- Limitations

This study analyzed a sample of crowdfunding platforms. However, not all platforms chose to disclose all the information that could be relevant for the study. One can identify a few limitations in this study, mostly related to these platforms reporting discrepancies. First and foremost, the sample of platforms with *total money raised* information is relatively small (n=80), especially if compared to the total number of identified platforms (n=390).

A particular concern is the low reporting in the *prizes* platforms (see Tables 3 and 4). Not even 20% of the *prizes* platforms divulged the total amount of money they raised and, consequently, were included in the analysis. All of the other types of platforms had a significantly higher

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<sup>27</sup> CrowdFunding Intermediary Regulatory Association

(double or more) percentage of total platforms included in the final sample. This is unfortunate and can bias the results of the analysis, for example, if a significant number of *prizes* platforms that didn't report their *total money raised* outperform the average. However, we have no data indicating that this is the case.

Hopefully some of the platforms that weren't available to disclose that information today will do so in the future. This would be the best way to overcome the identified limitations.

## VII- Future Research

Crowdfunding is evolving at a rapid pace as entrepreneurs and governments gain awareness of it and explore its potential. As such there is much left to be explored and understood about it.

As recently as April 5, 2012 the JOBS Act<sup>28</sup> was signed into law by President Barack Obama. This law includes a section that establishes a framework for the operation of crowdfunding platforms in the USA. The USA are currently, and by far, the country that hosts the most crowdfunding platforms (151 platforms out of 390). This law is expected to fuel the growth of the phenomenon of crowdfunding in the USA, particularly “for-profit” crowdfunding that supports startups and particularly *equity* and *revenue sharing* platforms. Future studies in this area can evaluate and measure the impact of the introduction of legislation like this.

The UK government has also taken steps to stimulate the development of crowdfunding. On March 6, 2012 *Seedrs* became “*the first equity platform to be approved by a major financial regulator in the World*”(Seedrs 2012). The platform registered with the UK's Financial Services Authority (FSA).

The UK has particularly favorable legislation when it comes to lending platforms. By not imposing extremely high limits on minimum amounts raised<sup>29</sup> and easing up on bureaucracy, the UK has an environment that allowed the appearance of successful platforms like *RateSetter*. These lending platforms have leveraged efficiency gains and to build a profitable business.

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<sup>28</sup> Appendix 9 – The JOBS Act

<sup>29</sup> In Germany, for example, an entity has to raise €20 million before it can obtain a license to operate online

There is also the opportunity to serve an underserved market. Small business lending has been decreasing in the US and Europe. In 2011, \$54billion dollars less were loaned to small businesses, comparing to 2008 (Avery 2012). Banks incur in a lot of costs to reduce the risks of loaning to small businesses and all for a relatively low payback.

Going forward, it would also be interesting to have more contributions that help understand the motivations of the investors in crowdfunding platforms. Such an input could further clarify if in fact the investors are increasingly looking at crowdfunding as an important revenue source. Valuable contributions could also be made regarding the evolution of the public awareness of crowdfunding and the willingness to invest in such platforms. In essence, crowdfunding has had a meteoric rise and it will be interesting to find out if this phenomenon will continue to grow and if it evolves into a fully fledged alternative to traditional bank lending.

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## IX- Appendixes

### Appendix 1 – Kickstarter Project

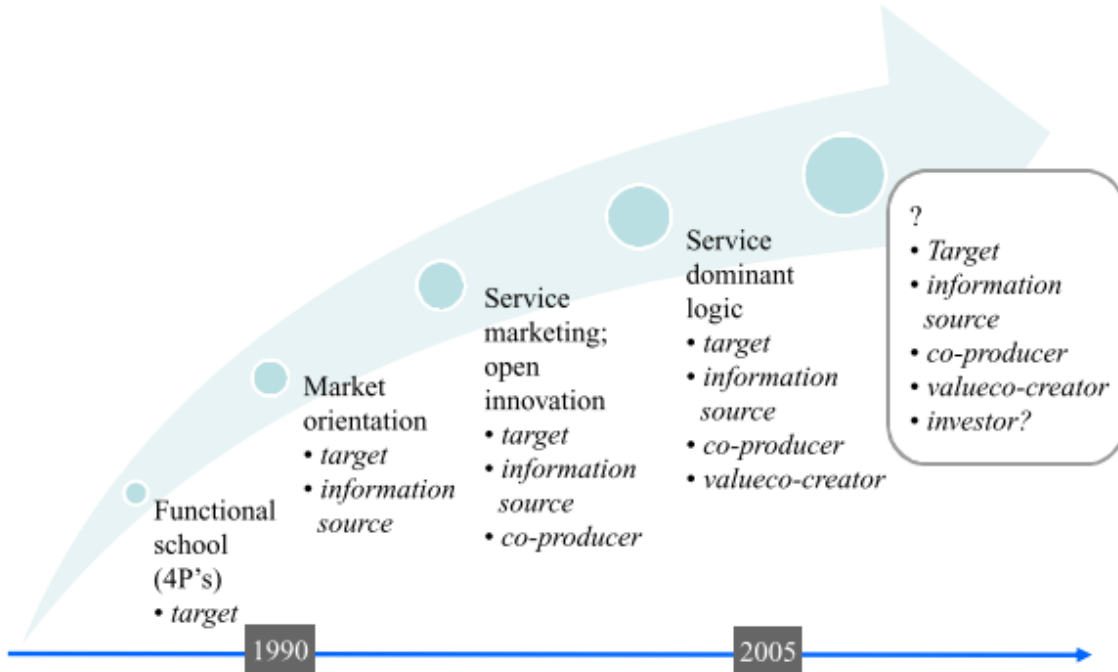
<http://www.kickstarter.com/projects/hop/elevation-dock-the-best-dock-for-iphone?>

(Accessed on 22/05/2012)

The screenshot shows the Kickstarter project page for 'Elevation Dock: The Best Dock For iPhone'. The page features a navigation bar with the Kickstarter logo, 'Discover great projects', 'Start your project', a search bar, and links for 'BLOG', 'HELP', 'SIGN UP', and 'LOG IN'. The project title is 'Elevation Dock: The Best Dock For iPhone', with a subtitle 'A Product Design project in Portland, OR by Casey Hopkins · send message'. Below the title are tabs for 'PROJECT HOME', 'UPDATES 15', 'BACKERS 12,521', and 'COMMENTS 660'. The main content area is split into two columns. The left column shows a video player with a play button over an image of the iPhone dock. The right column displays funding statistics: '12,521 BACKERS', '\$1,464,706 PLEDGED OF \$75,000 GOAL', and '0 SECONDS TO GO'. A green banner indicates 'FUNDING SUCCESSFUL' with the text 'This project successfully raised its funding goal on February 11.' Below this, a call to action says 'PLEDGE \$59 OR MORE' with '3726 BACKERS'.

On February 11, 2012 product designer Casey Hopkins successfully raised US \$1.464.706 to finance the production and distribution of an elevation dock for the Apple iPhone. He surpassed his funding goal (US \$75.000) by pre-selling his product to 12 521 paying customers through the popular site Kickstarter.com, effectively guaranteeing the success of the project before actually investing money on production.

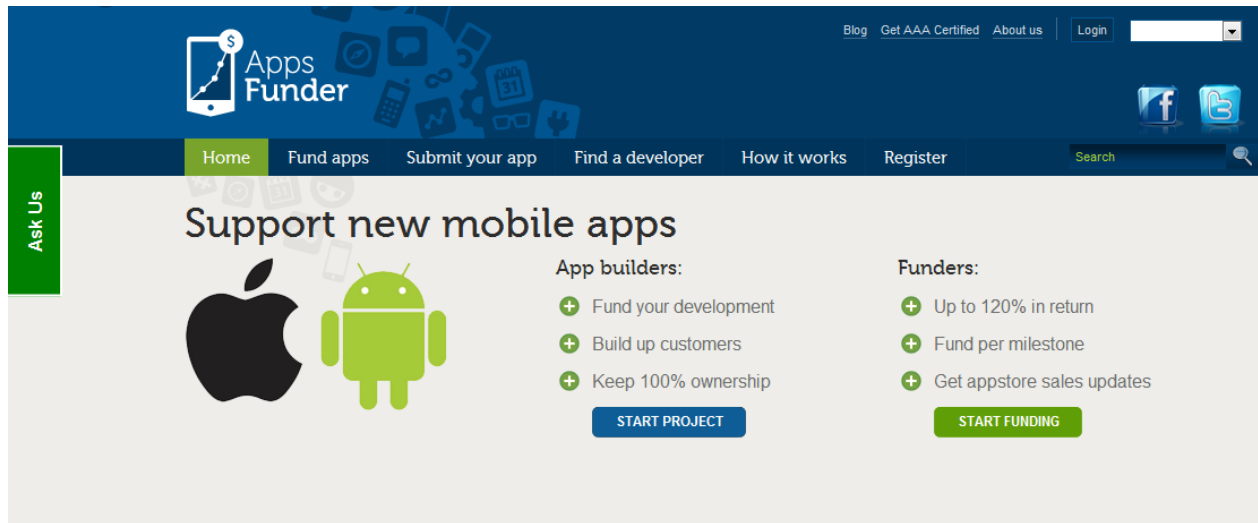
**Appendix 2 – “The emerging role of consumers as investors” (Ordanini et al. 2011)**



### Appendix 3 – Example of Platform with Multiple Incentive Schemes (Apps Funder)

<http://www.appsfunder.com>

(Accessed on 18/07/2012)



Apps Funder is a crowdfunding platform that started operating in 2011. It specializes in the funding of projects to create mobile apps.

This platform offers investors not only the app that they supported (prize), but also a cut from the revenues of that app's sales (revenue share), in return for a financial commitment to fund the development of the app.

## Appendix 4 – Example of a *Prizes* Platform (Indiegogo)

[www.indiegogo.com](http://www.indiegogo.com)

(Accessed on 23/07/2012)



Indiegogo is an American platform launched in 2008. It supports a wide variety of projects (art, design, politics, etc...) and uses the *prizes* model. This means that each project owner posts his/her project in the website and establishes different contribution levels. For each level, there is a specific reward associated.

For example, the project “Ascent for Survival” (<http://www.indiegogo.com/ascentforsurvival>) was created by two artists to raise money to fund their comic book novel’s production. They established six levels of contribution. The lowest level of contribution, \$5, rewarded investors with a reference on the “thank you page” of the novel (pictured). The highest level, \$500, rewarded investors with a signed and hand drawn original copy of the novel.

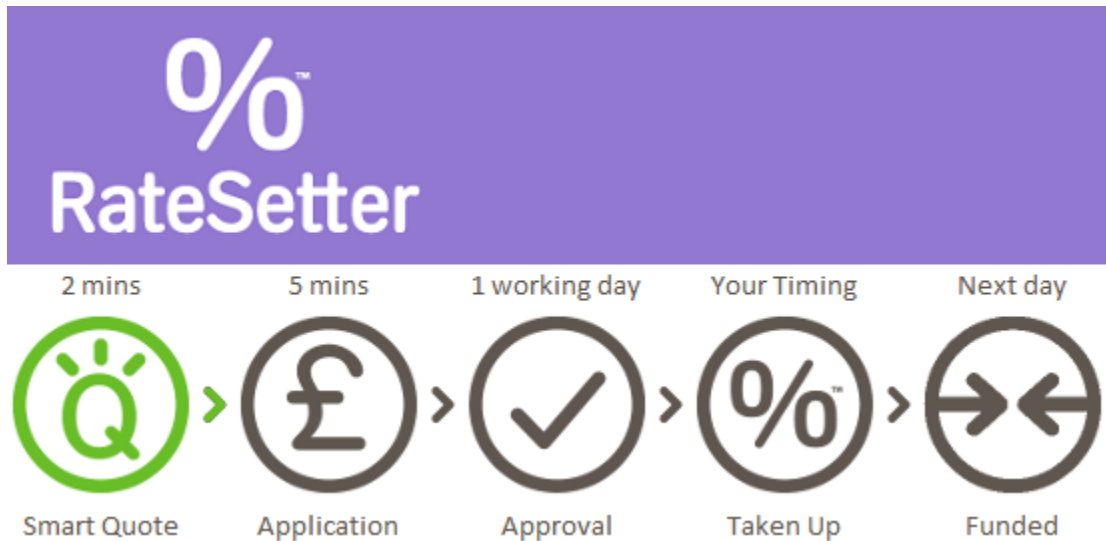
Project owners in *prizes* platforms can offer a wide array of perks to their investors in exchange for their contribution. The value and importance of these perks is usually linked to the amount invested. Bigger investments typically yield better prizes. Among the most common rewards are: t-shirts, the output of the project and formal credits.

Indiegogo charges the project owners with a percentage of the funds raised.

## Appendix 5 – Example of an *Interests Platform* (Rate Setter)

<http://www.ratesetter.com>

(Accessed on 23/07/2012)



Rate Setter is an UK-based platform that was launched in 2010. It is a P2P lending platform. It functions as a marketplace for loans that matches borrowers and lenders according to the conditions that both parts are looking for. The platform acts as an intermediary and charges an administration fee and a credit rate fee.

## Appendix 6 – Example of an *Equity* Platform (ASSOB)

<http://www.assob.com.au>

(Accessed on 23/07/2012)

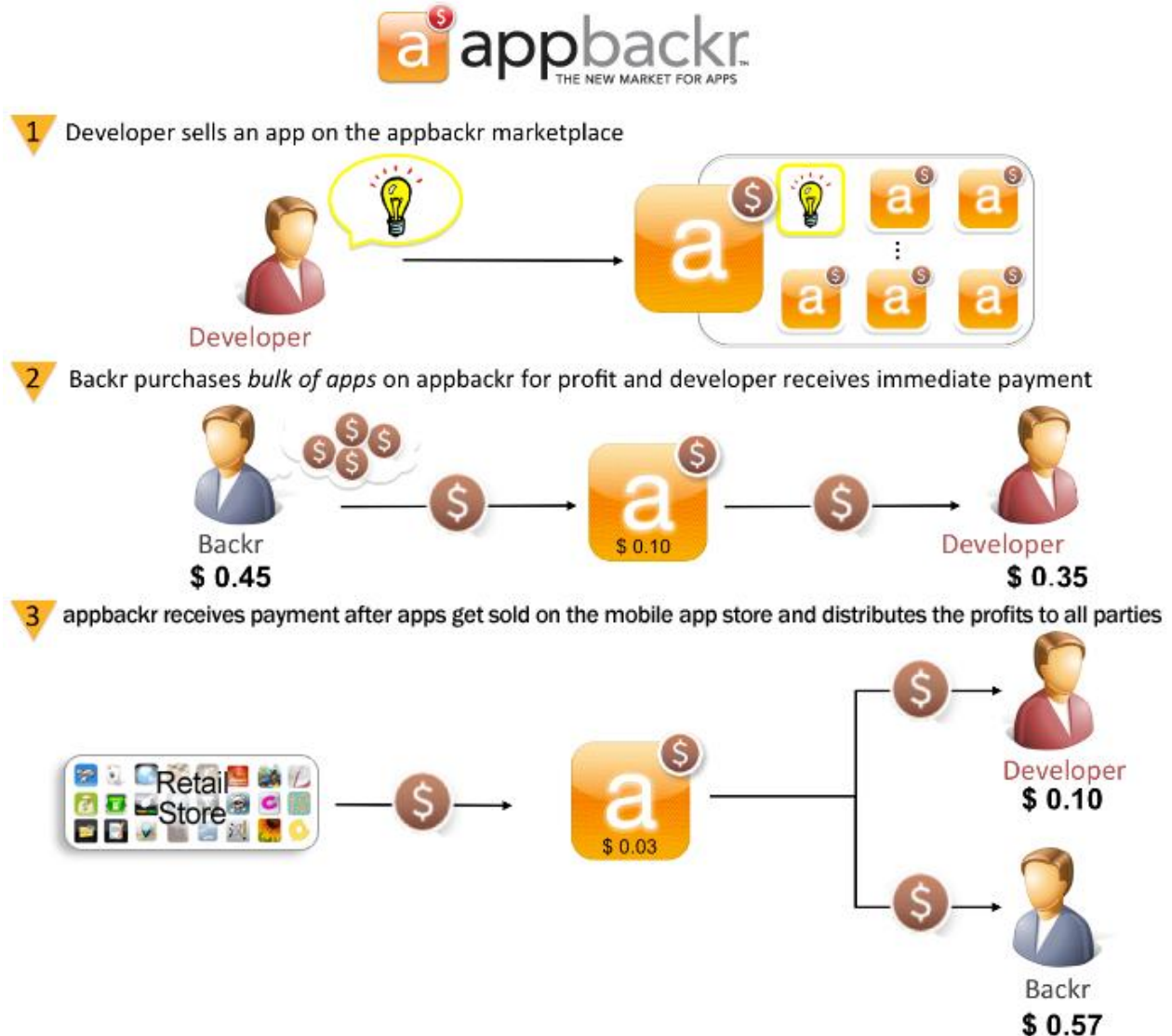


Australian Small Scale Offerings Board (ASSOB) is a crowdfunding platform launched in 2004. ASSOB is an equity-based platform. The platform profiles a number of startups and companies and connects them with funders, who are looking to buy shares. This platform charges fixed fees for admission in the platform and for each month of a capital raising campaign. ASSOB also charges an 8% transaction fee over the raised funds. Besides access to a database, this platform also works closely with the companies who are looking to raise capital by helping them through the process (e.g.: legal compliance).

## Appendix 7 – Example of a *Revenue Share Platform* (Appbackr)

<http://www.appbackr.com>

(Accessed on 23/07/2012)

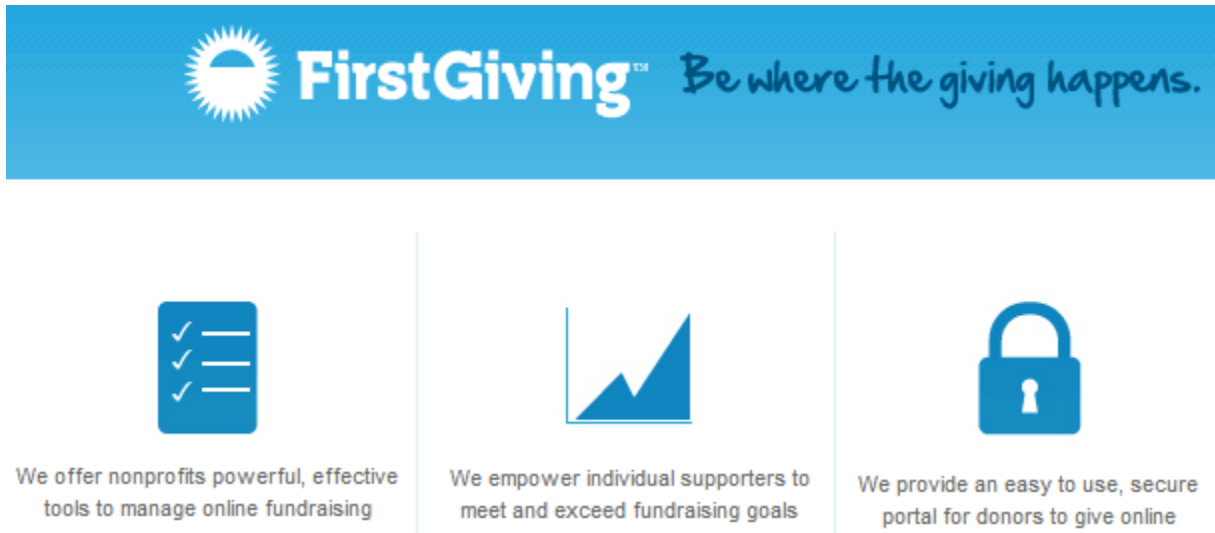


Appbackr is a US-based crowdfunding platform launched in 2010. This platform allows mobile app developers to fund their work by giving shares of future revenues to investors. The process is simple (see picture above). First, the investors buy revenue shares (a percentage of future revenues generated by the sale of the app). Once the app is finished, it is launched in a mobile app store. When the app store transfers the revenues generated by the sale of the app, the developer compensates the investor, as well as the platform.

## Appendix 8 – Example of a *Donations* Platform

<http://www.firstgiving.com>

(Accessed on 23/07/2012)



First Giving is a US-based crowdfunding platform launched in 2003. This platform follows the *donation* model, as it gives no material incentive to the users that invest in the projects hosted. First Giving hosts non-profit projects and accepts donations from a crowd of users. Additionally, this platform also allows the users to setup their own fundraising campaign. They can share their story and try to meet certain fundraising goals, all in favor of an organization.

First Giving charges an annual fixed fee of \$500 as well as a 5% commission on funds transferred to the non-profit organizations that use the platform.

## Appendix 9 – The JOBS Act

Patrick McHenry, a United States congressman from North Carolina's 10<sup>th</sup> district, led the first legislative effort to bring crowdfunding to the mainstream. On September 14, 2011 he introduced the *Entrepreneur Access to Capital Act* on the US House of Representatives (McHenry 2011). After some changes made to address concerns about fraud and investor protection, the bill passed in the House with bipartisan support. In the Senate, two new bills were introduced to regulate the industry. In the end, a compromise was reached and provisions from all the bills were included under the *Jumpstart Our Business Startups Act* (JOBS Act) (Sacks 2012).

On April 5, 2012 President Barack Obama signed into law the JOBS Act. This law had bi-partisan support and included provisions intended to promote “for-profit” crowdfunding, namely by easing securities regulations. The bill established (Fincher 2011):

- A \$1million dollar (US) limit to crowdfunding securities transactions (that can be increased to \$2million dollars if the company fully discloses its financials)
- That users can invest up to \$10.000 dollars or 10% of their annual income (if less than \$10.000)
- That intermediaries (crowdfunding platforms) have to file with the Securities and Exchange Commission (SEC)
- An increase of the limit number of shareholders and assets from which a company is required to register for a public offering
- An exemption of certain registration requirements and prohibitions for crowdfunding platforms

Most importantly, this bill is the first piece of legislation to create a framework for crowdfunding in the United States. More specifically, on title III, the bill defines both “crowdfunding”<sup>30</sup> and “funding portal”<sup>31</sup> (Fincher 2011).

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<sup>30</sup> “Crowdfunding is a method of capital formation by which groups of people pool money, typically composed of very small individual contributions, and often via Internet platforms, to invest in a company or otherwise support an effort by others to accomplish a specific goal”

<sup>31</sup> (funding portal is) “any person acting as an intermediary in a transaction involving the offer or sale of securities for the account of others, solely pursuant to the crowdfunding exemption under this Act, that does not: (1) offer investment advice or recommendations; (2) solicit purchases, sales, or offers to buy the securities offered or displayed on its website or portal; (3) compensate employees, agents, or other persons for such solicitation or based on the sale of securities displayed or references on its website or portal; (4) hold, manage, possess, or otherwise

However, some feel like the bill could have gone further. Rep. McHenry defended a \$5 million dollar threshold (instead of the \$1million/\$2million dollar one) and was particularly disappointed at the prohibition of general solicitation included in the bill (Sacks 2012). This provision effectively bans the platforms to solicit funding in, for example, social media websites (e.g.: Facebook, Twitter). This is a significant blow for platforms that have been riding the wave of the social media phenomenon and capitalizing on it to scale their business.

Nevertheless, these first steps taken in the United States have an enormous impact on this global phenomenon. North America is the largest market for fundraising in crowdfunding, with \$837 million dollars in 2011 (Empson 2012). Also, 151 of the 390 platforms I identified for this study (39%), and 31 of the 80 that comprised the studied sample (39%), are US based. Additionally, some of the most prominent platforms are American.

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*handle investor funds or securities; or (5) engage in other activities determined by the Securities and Exchange Commission (SEC). Amends the SA to set forth qualification requirements for such crowdfunding exemption, including those for intermediaries and issuers”*

## Appendix 10 – Regression Results

Table 9 - Variables Summary

Independent	Dependent
lprizes <sup>1</sup>	Total Money Raised
ldonations <sup>1</sup>	<b>Control</b>
llending <sup>1</sup>	Years Active
lequitysharing <sup>1</sup>	Notoriety Index

1. dummy variables

Variables	Model 1 coef/se	Model 2 coef/se	Model 3 coef/se	Model 4 coef/se
ilending	<b>2,983***</b> (0,933)	<b>1,683*</b> (0,921)	<b>3,317***</b> (0,797)	<b>2,192***</b> (0,826)
iequitysharing	<b>2,167**</b> (0,935)	1,390 (1,025)	<b>2,790***</b> (0,853)	<b>2,007**</b> (0,900)
idonations	<b>2,601***</b> (0,841)	1,061 (0,879)	<b>2,774***</b> (0,689)	<b>1,499*</b> (0,770)
years active		<b>0,572***</b> (0,128)		<b>0,457***</b> (0,131)
notoriety index			<b>0,000***</b> (0,000)	<b>0,000***</b> (0,000)
_cons	12,276*** (0,588)	11,232*** (0,595)	11,617*** (0,439)	10,955*** (0,480)
Number of observations	80	80	80	80
R2	0,123	0,352	0,314	0,447
F	4,690	14,256	15,125	26,566

note: \*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1

baseline: *lprizes*

## Appendix 11 – Detailed Statistical Analysis

Results from OLS Regression performed on the sample.

Source	SS	df	MS	Number of obs = 80		
Model	359.696388	5	71.9392776	F( 5, 74) =	11.97	
Residual	444.871267	74	6.01177388	Prob > F	= 0.0000	
				R-squared	= 0.4471	
				Adj R-squared	= 0.4097	
Total	804.567655	79	10.1844007	Root MSE	= 2.4519	

lperf	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
iequitysharing	2.007353	.9745856	2.06	0.043	.0654488	3.949257
ilending	2.192382	.8458576	2.59	0.011	.5069742	3.87779
idonations	1.498502	.8001255	1.87	0.065	-.095783	3.092787
alexanotoriety	.0001784	.00005	3.57	0.001	.0000788	.000278
p_yearsactive	.456944	.1083786	4.22	0.000	.2409949	.672893
_cons	10.9551	.6286978	17.43	0.000	9.702393	12.20781

Variance Inflation Factor for each dependent variable and each control variable.

Variable	VIF	1/VIF
idonations	2.02	0.494560
ilending	1.84	0.542534
iequitysha~g	1.50	0.667131
p_yearsact~e	1.27	0.789599
alexanotor~y	1.12	0.894260
Mean VIF	1.55	

Low VIF coefficients indicate that there are no multicollinearity issues.

## Appendix 12 – List of Platforms Analyzed

1 Dollar 1 Home, 1% Club, 100 Days, 10Beyond, 33 Needs, 4 Just 1, 40 Billion, 8-Bit Funding, A8muf Crowdfund, ACCION, ActBlue, AcumenFund, Adbacker, Advert Activist, Africa Unsigned, Akvo, Ammodo, Angel Shares, App Backr, Apps Funder, Artha Platform, Artiste Connect, Artistshare, Artspire, ASSOBO, Ativa Ai, Babeldoor, Babyloan, Bananacash, Bandtastic, Bank to the Future, Bankeez, BBVA Friends and Family, BEEEx, Benfeitoria, Better Place, Better World Network, Bloom VC, Boomerang, Busker Label, Buy Credit, Buzz Entrepreneur, Buzzbnk, Campfire, Cap Angel, Caring Bride, Carnet de Mode, Cashare, Catarse, Causes, CauseVox, Cauzoom, Changing the Present, Charity Factors, Chipin, Cine Crowd, Cinema Reloaded, Cinema Shares, Citizen Effect, Civic Sponsor, Civilised Money, CKIE, Cofolio, Cofundit, ComeçAki, Commonbox, Community Lend, Comproyecto, Comunitae, Couch Tycoon, Create Jobs for USA, Creative Selector, Crowd About Now, Crowd Cube, Crowd Culture, Crowd Mecca, Crowdbackers, CrowdBooks, Crowdfunder, Crowdfunding Facilities, Crowdrise, Crowdtilt, Deki, Demo Hour, DEVEXO, Donors Choose, Dream Bank, Dreamore, Early Shares, Education Generation, Ekjaa, Elveos, Embolacha, Emphas.is, Epic Change, Epic Step, Eppela, Eureka Fund, Everyday Hero, FABrique d'Artistes, Faithfunder, Fandyu, Feed The Muse, Field Theory, Film Funds, Finance Utile, First Giving, Fondeadora, Fondomat, Fondomat EU, Friendfund, Friends Clear, Frooble, Fund St. Louis, Fund Weaver, Fund:it, Funda Geek, Fundchange, Funded By Me, Funder Thunder, Funding 4 Learning, Funding Circle, Fundly, Fundraise, Fundrazr, Fundstarter, Geldvoorelkaar, Gesture Crowdfunding NZ, Give a Little, Give Corps, Give Forward, Givezooks, Givology, Go BIG Network, Go Fund Me, Go Get Funding, Go Give Social, Go Green Social, Good Return, Goteo, Greater Good, Greedy or Needy, Green Funder, Green Girl, Green Note, Green Unite, Grow VC, Helpedia, Helpers unite, Hope Mongers, Humanity Calls, I Grin, I make rotterdam, Ideacious, Ideame, Ikalmart, Impulso, Incentivador, Indie go go, Indulj, Ingressar, Injoinet, Inkubato, Innovestment, Interactor, Inuka, InVenture, Invest Fashion, Invested.In, Investiere, Investors Ally, Ioby, IOU Music, Ipledg, Ise Pankur, IWN Internship Fund, Jolkona, Just Giving, Justin Wilson Investor Club, Kachingle, Kapipal, Katapult, Kickstarter, Kifund, kisskissbankbank, Kiva, Kokos, Kopernik, Kreandu, Lainaaja, Lánzanos, Launcht, Lend With Care, Lending Club, LET'S, Libros, Loanio, Look at my Game, Loud Sauce, Lubbus, Lucky Ant, MakeITopen, Maneo, Mashup Finance, Massivemov, McKenson Invest, MeBlitz, MedGift, Media Funders, Mega Total, Mercy Corps, Mes Vignes, Micro Giving, Micro Graam, Micro Ventures, Microist, Microplace, Milaap, MIMOONA, Mini Donations, Mobcaster, Mobile Movement, Movere, Movies Angels, Movimento 1 Euro, Mutuzz, My Azimia, My Major Company, My Micro Invest, My Projects (Cancer Research UK), My Sherpas, My Show Must Go On, My Witty Games, MYC4, Mycause, MyELEN, Myfootballclub, Namaste Direct, New Face Film, New Jelly, Nieuwspost, Nordstarter, Oocto, Open Genius Project, Opportunity International, Opportunity International Canada, Peerbackers, Peerform, People Capital, Peoplefund.it, Petridish, Philanthroper, PIFWORLD, Pirate My Film, Pixonauts, Plan Big, PleaseFund.Us , PledgeMe , PledgeMusic , Pledgie , Pling, Polak Potrafi , Porto24 , Poz.ycz, Pozible, PPDai , PPL, PRÊT D'UNION, Profounder, Project Powerup , Projectgeld, Prosper, Proyectanos , PUBLUSH Press , Qifang, Queremos, Querk , Quero na Capa, Rally , Rang De , Rate Setter, Razoo , Rebirth Financial , Recoup , Respekt , Revenons à la musique , Revenue Trades , Ricebowlproject , Ripple, Rocket Hub, Rusini , Sandawe , SASIX, SaveTogether, Scholar Match , Schrijversmarkt , SciFlies , Seedmatch , SeedQuick, Seedrs, SeedUps, SeeYourImpact , Sellaband, Serial Liver , ShadeFund , Share a Gift , Share2Start , Sibite , SkyFunder , Slated , Small Change Fund, Smartnme, Smava , SocialWish, Socios Inversores , Sokap, Solar Mosaic, SoLoCo, Somesha, SoMoLend, SonicAngel, SOUP , Spacehive, Sponduly, Sponsorcraft, Sponsorgoal , Sponsume, Sponzu , Spot.us, spreadbudskabet, Sprigster, Springboard, Sprowd, Start Next, Start Some Good, Starteed, StartersFund, Startup Addict, StoryFunded , Symbid, Talentboek, TechMoola , TenPages , The (Iw) Movie Project , The Hoop Fund , The Modest Needs, The One Percent Foundation , The Open Source Science Project , The People of Godspell, The Point, The Wisdom of Others, ThrillCapital, TipTheWeb , Touscoprod, Trustbuddy, Tu Mecenaz, Twask , Uend, UJIMAA, Ulule, Unbound, Unglue.it, United Prosperity, Vakinha, Veecus, Venture Bonsai, Verkami, Vision Bakery , Vittana, Volanda, Voordekunst, WacaWaca, We fund, We komen er wel, WealthForge, Wegetthere , Wemakeit, WeSayWePay, WildlifeDirect, WiSEED , Wishbox , Wokai , World Penny Jar, Yesideias, Yes-secure, YouCaring, Zafèn, Zidisha, Zimple Money, Zopa

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