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Crowdfunding: Is It a Viable Financial Model for Nonprofits?

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Crowdfunding: Is it a viable financial model for nonprofits?

Colleen M. Kenost

Capstone Document Submitted in Partial Fulfillment of the Requirements
for the Degree of
Doctorate of Interdisciplinary Leadership

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Abstract

Background: As traditional funding models become exhausted in response to fiscal constraints, successful leaders are forced to use innovative and non-traditional social entrepreneurial tools in order to bring their goals to life. One of these new tools is crowdfunding.

Purpose: This paper analyzes the relationship between social entrepreneurship, leadership and crowdfunding, as a growing number of nonprofits are deploying crowdfunding as a revenue stream for fundraising.

Methods: Analyzing nonprofit data from Kickstarter, this study utilizes descriptive statistics as well as two-sample t-test and logistic regression models to identify success metrics for crowdfunding being a viable financial model for the nonprofit sector.

Results: As a result of the analysis of 637 nonprofit projects on Kickstarter, some significant differences were found between the two samples. It appears that variables, such as goal, backers, and certain categories are predictive of project success, whereas project duration is not statistically significant.

Conclusions: Organizational leaders who choose to use crowdfunding for nonprofit and social entrepreneurial ventures can be aided by taking a careful look at metrics and variables during the planning stage. Crowdfunding has the potential to be a viable financial source for nonprofits, as long as social entrepreneurs or leaders understand how to set a realistic goal and chose a category that appeals to potential supporters.

Approval Page

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Governors State University
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Acknowledgements

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Chapter 1. Introduction to Crowdfunding

1.1 Statement of the Problem

Crowdfunding, at a basic level, occurs when multiple people across a broad spectrum come together in an organized effort to provide funding for a specified project. However, this process implies much more than just a group of people pooling money together to fund the development or implementation of a new product or service. Crowdfunding is a modern innovation, a response to the rise of the digital age, and the new paradigm of shared knowledge in a rapidly collaborative world. In the words of Mollick (2014), "Crowdfunding is a novel method for funding a variety of new ventures, allowing individual founders of for-profit, cultural or social projects to request funding from many individuals, often in return for future products or equity" (p. 1). Crowdfunding has found great meaning in a new generation which has no qualms about sharing data, pooling resources, and envisioning product and service delivery methods that may never before have existed.

This type of effort requires the improvement of skills for leadership. Leadership is currently being redefined in a myriad of different ways, in response to the shrinking globe that is a direct by-product of electronic collaboration. Good leaders can become great leaders by embracing and championing a cause. According to Speiser (2015), "Leaders...can be developed by finding a cause" (p. 25). Many new leaders will emerge as new causes are envisioned and championed. The electronic environment in which many young people grow, learn, and thrive allows for these causes to be brought to the mainstream. Many new leaders may be forged in the process. One way for these leaders to communicate their goals and work towards making them a reality is by embracing crowdfunding. Additionally, crowdfunding may enhance the skills of the leaders of the future.

Leadership can take many forms in this new age of digital community. Leaders can be geographically dispersed and can communicate and foster stewardship and collaboration using social media, e-conferencing, and other collaborative tools. Additionally, leaders of today must embrace entrepreneurial techniques in order to meet the fast pace of change in today's markets. This paper focuses on the nonprofit, governmental, and social sectors, and therefore a focus on social entrepreneurship. Social entrepreneurship has been defined by Mair and Noboa (2003) as involving, "innovative approaches to address issues in the domains of education, environment, fair trade, health and human rights and is widely regarded as an important building block of the development of countries" (pg. 1). This is admittedly a broad definition, but so are the implications of this type of entrepreneurship. It is also of note that this definition was written in 2003, in the years preceding the meteoric rise of both social media and advanced e-conferencing, which skyrocketed such types of leadership and entrepreneurships into much higher levels of visibility and relevance.

The purpose of this study is to explain the history and current state of crowdfunding, as well as how crowdfunding has impacted the current state of leadership, and how leadership has become an important virtue in crowdfunding. This research intends to examine how social entrepreneurship, itself a recently-defined concept, has played an important role in leadership in crowdfunding. Furthermore, in order to prepare the basis for the interrelation between crowdfunding and leadership, the related concepts within leadership, as well as entrepreneurship, are described and analyzed. Those concepts are then put into the perspective of crowdfunding to show their interrelation. In this paper, literature on crowdfunding and leadership is presented along with practical application, suggestions, and implications for future studies.

1.2 Statement of the Purpose of the Study

This paper address the following research question: Is crowdfunding a viable financial model for nonprofits? To answer this question, this study defines why crowdfunding is a relevant solution for fundraising efforts and also defines metrics of success for utilizing crowdfunding in the nonprofit sector. In addressing this question, this study used data from nonprofits that have utilized Kickstarter, one of the largest online crowdfunding platforms. This study reviews the amount of major crowdfunding ventures and whether or not the number of major such ventures has increased over time.

The remainder of this study provides an overview of crowdfunding, social entrepreneurship, and leadership as well as how they increasingly are more linked in today's marketplace. A brief review of literature highlights on how nascent the field of crowdfunding is and how it will be critical to continue studying this field, especially in relation to leadership and entrepreneurship. The fourth section describes the data and methodology and the fifth section presents research findings. The article concludes in the sixth section with a discussion of the study implications and directions for future research.

1.3 Operational definitions

- **Crowdfunding (CF)** – Crowdfunding is a method for funding a variety of new ventures, allowing individual founders of for-profit, cultural or social projects to request funding from many individuals (Mollick, 2014).

- **Crowdfunding platform (CFP)** – A crowdfunding platform is an Internet-based, social media networks or websites that launch project campaigns to solicit funding (Harrison, 2013).

- **Campaigner** – The campaigner is one who initiates or proposes the project to be funded (Massolution, 2015).

- **Crowdfunder** – A crowdfunder is an individual who financially supports a campaign/project (Massolution, 2015).

- **Entrepreneurship** – Entrepreneurship is the capacity and willingness to develop, organize and manage a business venture along with any of its risks in order to make a profit (Businessdictionary.com, n.d.).

- **Social Entrepreneurship (SE)** – SE is the field of entrepreneurship that focuses on financial ventures for social causes (Mair and Noboa, 2003).

- **e-Leadership** – e-Leadership is a concept of leadership that works across time, space and geographic boundaries (Avolio, Kahai, and Dodge, 2000).

- **Jumpstart Our Business Start-ups (JOBS) Act** – The JOBS Act was passed in 2012 to legalize the sell of equity in a business to a mass number of investors through online, social network platforms (Stemler, 2013).

Chapter 2. Review of the Literature

2.1 Themes

2.1.1 Crowdfunding

Crowdfunding has been part of history in one form or another. The pooling of resources in order to better utilize resources is as old as history and has manifested itself in such ways as traditional fundraising to telethons or to initial public offerings of stock in corporations. However, the recent rise in social media platforms and other means of instant mass-electronic communications have created an environment in which messages can be spread quickly, and many more people across the globe evangelized about causes for which they may participate or financially support. This evangelizing is performed by leaders, sometimes e-Leaders, and sometimes those engaging in social entrepreneurship.

Crowdfunding has had a long history in the business world as a mechanism to raise needed capital for new ventures. In this way, crowdfunding encompasses components of both social media applications and traditional venture capital funding methods. While the financial and legal logistics of crowdfunding are similar to the guiding principles particular to venture capital funding, the mechanisms used to approach the potential investors, i.e. the crowd, are internet-based social media platforms such as Kickstarter and Indiegogo.

One of the major benefits of crowdfunding is its low costs. A simple crowdfunding campaign can be launched with as low as 10% of raised funds to cover administrative costs (NCN, 2016). Crowdfunding can be utilized when a leader of a cause simply has no access to traditional means of mass-communication or when there is a lack of financial support from nonprofits, especially from governments (NCN, 2016). For these reasons, crowdfunding is fast becoming more and more ubiquitous in today's landscape. For example, crowdfunding is,

"projected to become a $90-$96-billion-dollar industry by 2025, and is being touted as a valuable tool for nonprofits," (NCN, 2016, n.p.)

The recent growth and relevance of crowdfunding (CF) has led to a number of new definitions. The broadest definition of crowdfunding defines it as the collection of small financial contributions by a large number of individuals to finance or capitalize a specific project or endeavor (**Figure 1**).

Figure 1.
Definition of Crowdfunding. Illustration explaining the process of CF (adapted from PricewaterhouseCoopers LLP, 2016).

What is Crowdfunding?

Using small amounts of money from a lot of people to fund something

Little Money   **Lot of People**   **Power of CF**

By pooling small contributions of money...

...from groups of people who share common intrerests...

...everyone has the power to reach their financial goals...

Crowdfunding – an alternative source of capital
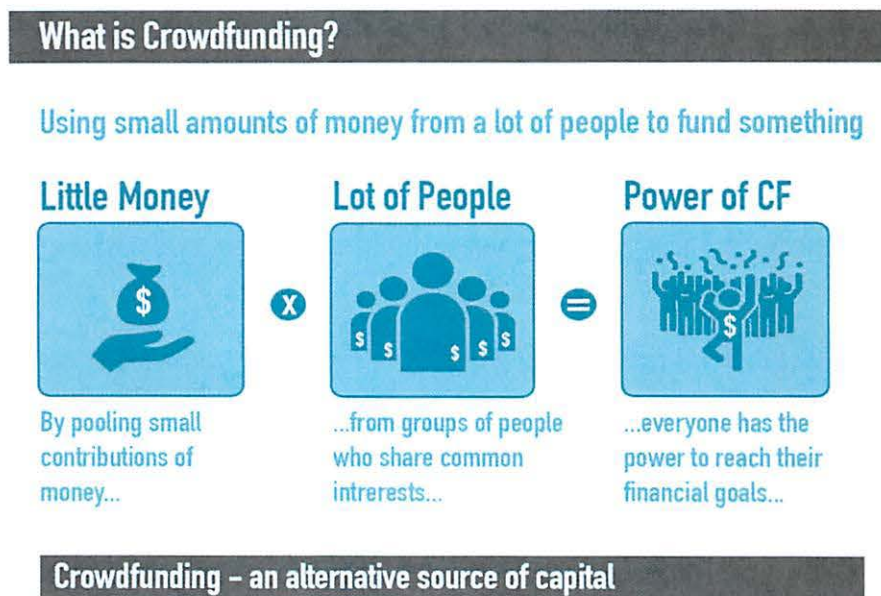
Schwienbacher and Larralde (2010) crafted a definition of why crowdfunding has become so important in today's society:

More recently, some entrepreneurs have started to rely on the Internet to directly seek financial help from the general public (the crowd) instead of approaching financial investors such as business angels, banks or venture capital funds. This technique, called

crowdfunding has made possible to seek capital for project-specific investments as well

as for starting up new ventures (p. 3).

This definition incorporates the differing facets of crowdfunding. First, CF is a response to the

lack of traditional channels for collecting funds from government agencies or other grantors.

Second, crowdfunding takes advantage of the still-nascent world of social media and e-

communication platforms which are becoming part of the fabric of today's modes of

interpersonal interaction. Finally, CF is a way for those engaging in social enterprises to quickly

spread the word of what they want to do among a diverse population of many people across the

globe at the push of a button.

Kuppuswamy and Bayus (2013) made the crucial distinction between crowdfunding

ventures and traditional financing. They emphasized two methods in which this new means of

communicating and collecting funds differs from the past: (i) crowdfunding can better utilize

much smaller individual contributions from a larger group of funders, and (ii) everyone can see

the levels of support from other funders while making their decisions on how much or how little

they would like to support a campaign or project, all in real time. This real-time viewing

innovation allows for both potential funders and for those collecting the funds to keep a tally on

what kinds of funds have been collected and run analytics about the funding as it comes in, also

allowing for more tools with which to entice and acquire additional funders. This innovation,

unique to crowdfunding, places more power in the hands of the social entrepreneur.

2.1.1.2 History of Crowdfunding

Even though crowdfunding has gained scholarly interest, CF has been around in less

obvious forms for centuries. A classic example of CF includes the campaign by Joseph Pulitzer

for the financing of the construction of the granite pedestal for the Statue of Liberty in the 1880s

(Freedman and Nutting, 2015). With the refusal of the state of New York to finance this, Pulitzer

turned to the power of the press. Through the *New York World*, he was able to urge New

Yorkers to help pay for this project through various activities, such as boxing matches, theater

productions and art exhibitions, to name a few. After five months, over $102,000 (mostly in

denominations of $1 or less) was collected from 125,000 people reviving the project and

ensuring the Lady Liberty's home on the Atlantic coast on October 28, 1886 (Freedman and

Nutting, 2015).

Perhaps, the word crowdfunding did not exist in the nineteenth century, but Pulitzer's

strategy is definitely considered a form of CF. Pulitzer deployed an emotional appeal via the

utilization of a mass dissemination tool to the crowd seeking financial support in nominal

increments. Fast-forwarding to today's society, the concept of crowdfunding still operates in a

similar fashion. Internet-based or online platforms have become the standard instrument for CF.

Recognized as one of the pioneers of modern crowdfunding, Brian Camelio, a Boston computer

programmer and musician, was inspired by the generosity of the audience after a dance show to

develop a website for the "crowd" to graciously donate or "fund" struggling artists (Freedman

and Nutting, 2015). His website ArtistShare was launched in 2003 and gave fans the opportunity

to pre-purchase the recording prior to its release date. The utilization of rewards-based CF has

enabled countless artists over the years to not only fund their projects but build long-term

relationships with their fans through various rewards such as advance copies of CDs, VIP access

to performances, or participation in meet & greets (Freedman and Nutting, 2015).

Notably, the passing of the Jumpstart Our Business Start-ups (JOBS) Act in 2012 has

catalyzed the utilization of CF as viable strategy for small business owners and entrepreneurs, as

it has legalized certain types of equity for small companies and start-ups. Title III, the

CROWDFUND Act, basically enables entrepreneurs and small business owners to sell a certain

amount of equity in their company to a mass number of investors through online, social network

platforms (Stemler, 2013). Prior to this Act, such business practices were considered illegal

under US securities laws. Further, the JOBS Act exempts CF from costly registration

requirements and allows CF websites to avoid being classified as a broker, which would

potentially impose hefty registration costs for them (Stemler, 2013). The CROWDFUND Act has

opened funding opportunities, through equity-based CF, for a myriad of underfunded small

business owners and entrepreneurs as well as provide investors with the new means to expand

their portfolios.

Many businesses have begun using CF (**Figure 2**). Private companies have taken the

lead, but other industries are also participating in this new paradigm. As illustrated in the figure

below, the different types of businesses utilizing CF are slowly beginning to equalize. More

analysis will need to be done over time to determine if this trend will continue.

Figure 2.
Types of businesses worldwide utilizing CF in today's market from 3rd quarter 2014 to 1st quarter 2015
(Crowd Valley, 2016). Illustration of the utilization of CF by global companies. As shown, private companies use CF more than other types of business, however, there has been a reduction from 47% in Q3 2014 to 37% Q1 2015.


2.1.1.4 Models of Crowdfunding

The two overarching types of crowdfunding, non-financial and financial, are defined by the relationship between the investor (crowdfunder) and the recipient (campaign owner) as well as the expectation of financial return on one's investment. There are five base crowdfunding models that fall under the two overarching models (**Figure 3**).

Figure 3.
Overview of base CF models (adapted from Massolution, 2015). Description of the 5 base
crowdfunding models and their return on investment.
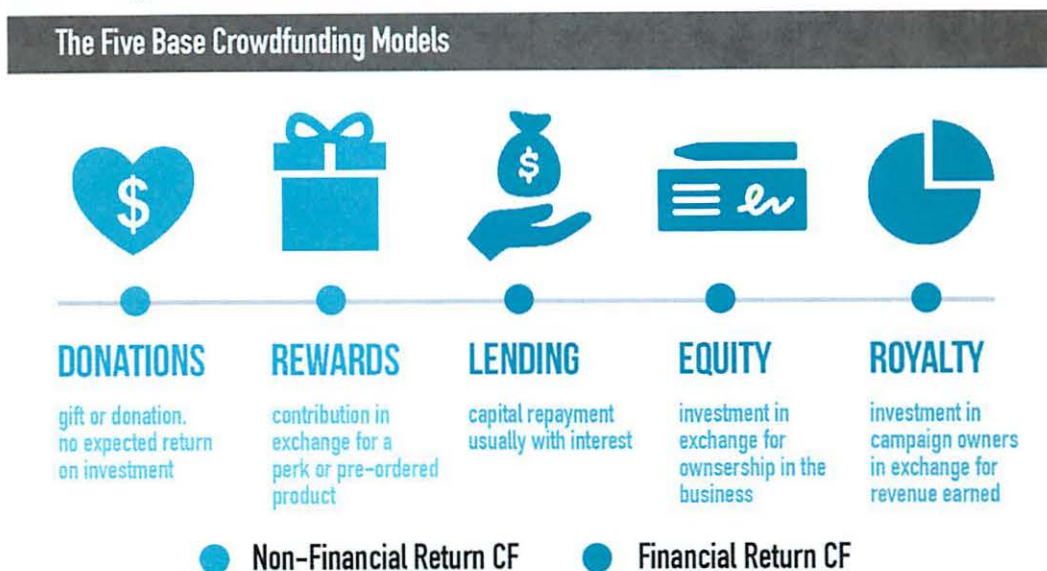
The donation-based model of CF relies on contributions from donors who do not expect

anything in return. Basically, these are gifts from the crowd and there is no return on their

investment. CFPs that seek such funding tend to concentrate on nonprofits or the charitable

sector (Harrison, 2013). The rewards-based model seeks capital funding from crowdfunders in

exchange for some form of benefit or reward. Typically, the campaign owner offers the

crowdfunders a "nominal token" such as the product that will be produced with the funds

collected during the campaign. This model does not offer an interest in the profit stream or any

shares. However, it is sometimes utilized to gauge demand for new products or services in the

market before a mass production or rollout. Even though donation- and rewards-based CF are

less risky than financial CF, they are still subject to the risk of fraudulent campaigns and cyber

security concerns.

The lending or peer-to-peer model enables contributors or investors to receive a return on

their capital with or without interest, depending on how a project is set up. Equity-based

crowdfunding offers investors a share in the profits or a stake in the business from the supported

projected. This model involves the sale of a security, a financial product, or an interest. A

crowdfunder's return is essentially tied to the future success of the invested business

(Massolution, 2015). This model offers greater rewards as the value of equity increases the

greater the business succeeds. The royalty-based model involves investors receiving a

percentage of revenue from fees based on the usage or licensing of the ongoing utilization of the

product or service.

2.1.1.4 Crowdfunding Today

Crowdfunding platforms (CFP) have increased in both volume and visibility, including

the increase of utilization of the previously explained models (**Figure 4**). The last decade has

seen the rise of CFPs such as GoFundMe, Kickstarter, and Indiegogo dominating the market

(**Table 1**). According to Mobile Cause (2016), 33% of all online donations are made via

crowdfunding, with 62% of CF happening on mobile devices.

Figure 4.
Growth of number of crowdfunding platforms from 2007 to 2011 by category based on 143 CFPs
worldwide (Crowdsourcing.org, n.d.). Illustration of growth of CFPs by year. As shown, 2011 has
experienced a significant growth in all three of the four models compared to previous years.
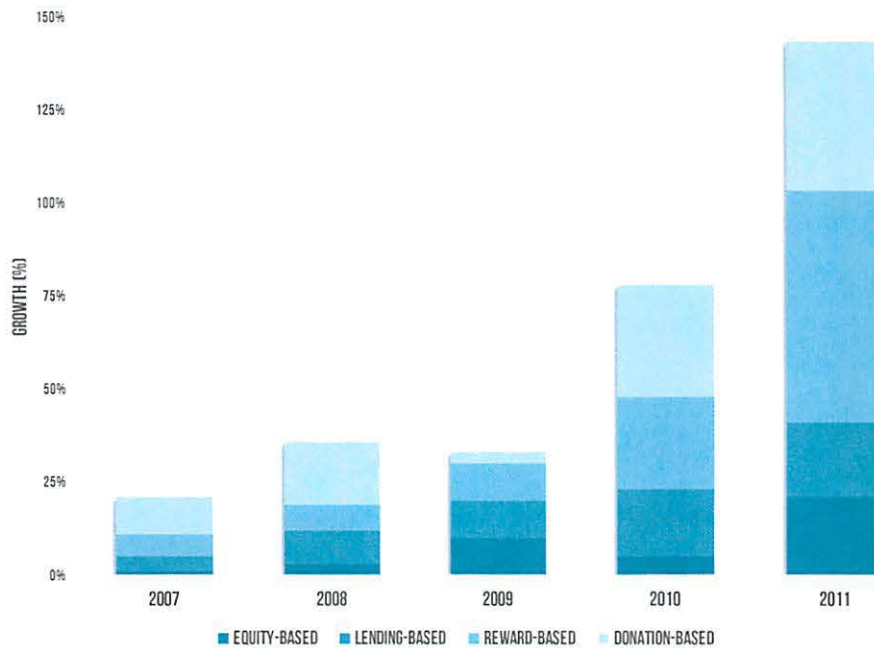
Table 1.
Top 10 crowdfunding sites based on independent online traffic (Alexa, 2016). Ranking of online traffic to
CFP websites.

Rank	CFP	US Alexa Ranking
1	GoFundMe	287
2	Kickstarter	241
3	Indiegogo	766
4	Teespring	1177
5	Patreon	1271
6	YouCaring.com	2851
7	Crowdrise	3649
8	DonorsChoose.org	3908
9	Kiva	4812
10	GiveForward	149333

It is evident that social entrepreneurs or start-ups companies have looked to CFPs as a

means to raise funds for social causes (30%) and general business and entrepreneurship (28%)

(**Figure 5**). For example, GoFundme, founded in 2010, is a crowdfunding platform that enables

individual users to raise monies for personal causes and life events, including medical bills and

tuition. As the most popular categories include medical, education, and emergencies, a majority

of the giving comes from family and close friends of the campaigner. Nevertheless, this CFP has

raised over $650M since its inception, with $470M from over $6M donors in 2014 alone

(GoFundMe, 2016).

Figure 5.
Distribution of most active CF categories in 2012 (Crowd Valley, 2016). Illustration of categories that
use CF as a financial revenue source. Social causes (30%) and business and entrepreneurship (28%)
dominate the market as shown.
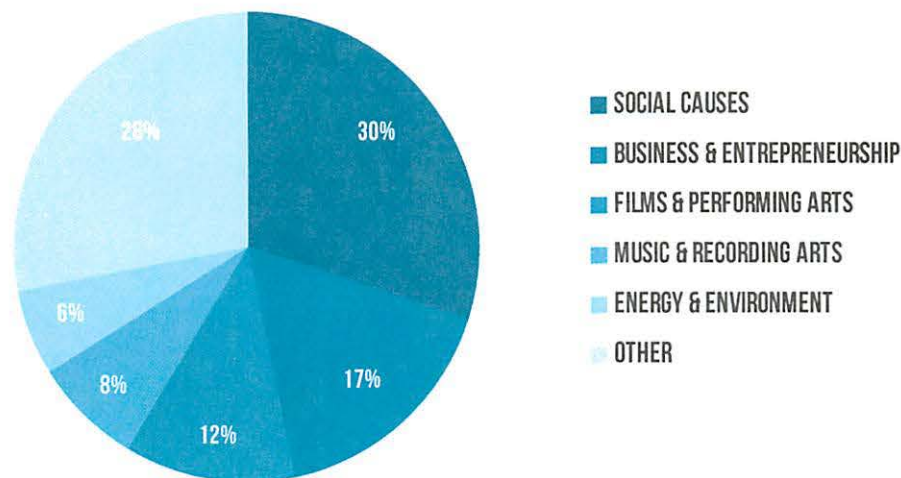
Indiegogo, another similar application for crowdfunding, was launched in 2008 "to

empower creative, entrepreneurial people everywhere to bring their ideas to life" through online

project campaigns (Indiegogo, 2016). In comparison to GoFundMe, this CFP supports a wider

range of project categories for supporters to choose. Some of its top projects have received

funding over the $10M. This CFP has a flexible funding option where projects can keep any

amount of contributions regardless of whether the project reaches its goals, or a fixed funding

where only contributions are utilized if the project reaches its goals. Indiegogo boasts of its

presence in 223 countries with over 15 million people from all over the world visiting their online campaigns monthly.

Launched in the United States in 2009, Kickstarter is a global crowdfunding platform which connects creative projects with funding from various backers. Project creators have the option to choose a deadline and a minimum funding goal. However, these projects must reach their funding goal; if not, pledged dollars will be forfeited. People who back Kickstarter projects are offered tangible rewards such as limited editions or early releases of products as well as special experiences in exchange for their pledges. The platform is currently only open for project creators from a small selection of countries but project backing is available internationally.

In this paper, Kickstarter is used as a case study for in-depth data analysis of nonprofits and crowdfunding. Since its inception, Kickstarter has funded over 102,000 successful projects with over $2.3 billion pledged (Kickstarter, 2016). In 2014 alone, 22,252 projects broken down into 15 categories were successfully funded with over $529 million pledged (**Figure 6**). Technology (125M), design (96.7M), and games (89.1M) were the top three financially supported categories, whereas journalism (1.9M), crafts (2.14M), and dance (2.7M) were the lowest pledged categories.

Figure 6.
Dollars pledged by category in 2014 (Kickstarter, 2016). Breakdown of dollars pledged via Kickstarter by category. Technology (125M), design (96.7M), and games (89.1M) were the top three financially supported categories, whereas journalism (1.9M), crafts (2.14M), and dance (2.7M) were the lowest pledged categories.
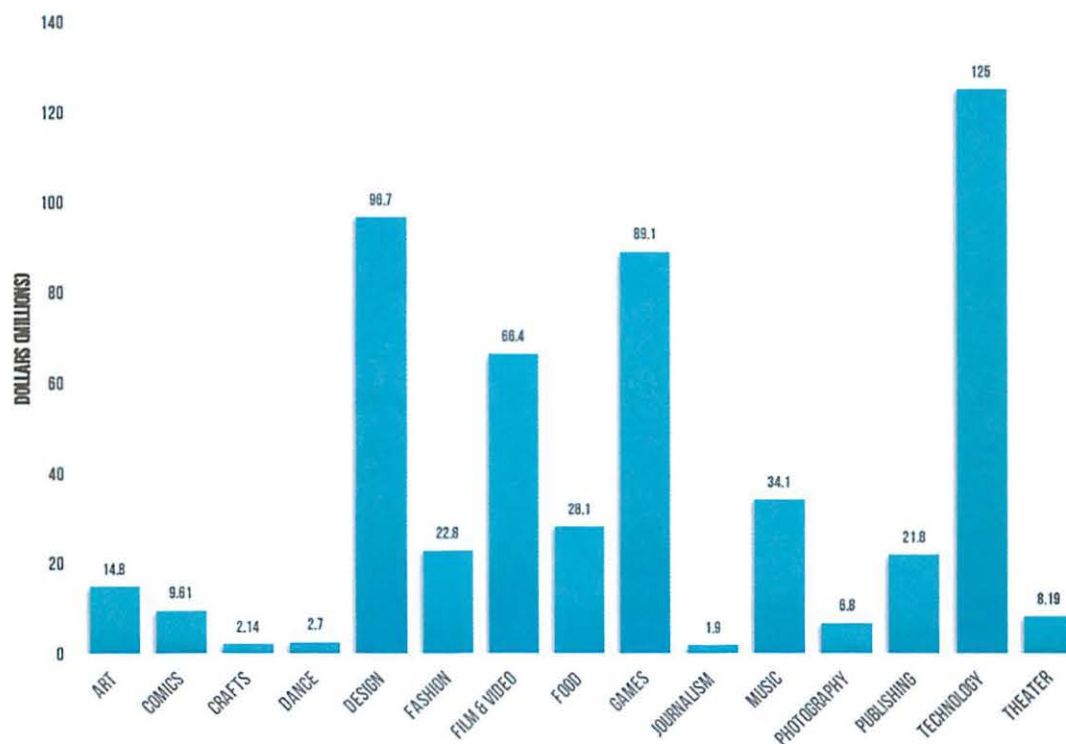

Nine of the 15 categories each had over 1,000 successfully funded projects, with music, film, and publishing leading the chart (**Figure 7**).

Figure 7.
Number of successfully funded projects by category in 2014 (Kickstarter, 2016). Breakdown of successful Kickstarter projects by category in 2014. Nine of the 15 categories each had over 1,000 successfully funded projects, with music, film, and publishing leading the chart.
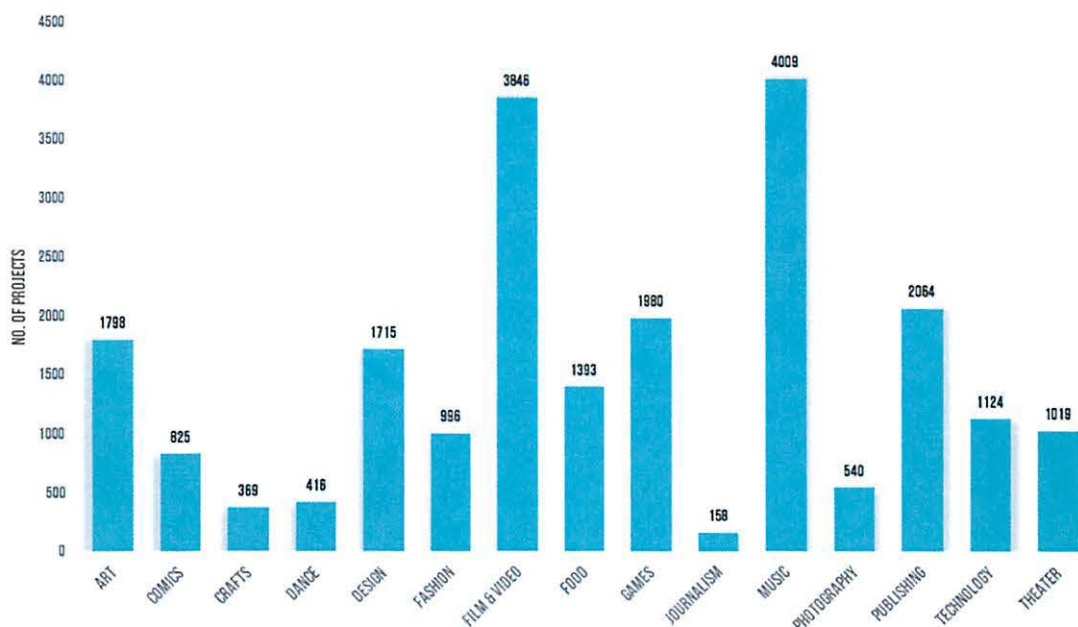
2.1.1.5 Existing CF Research

Crowdfunding remains a nascent field. It has emerged in recent years in response to a need which was not being met through traditional channels. However, scholarly interest has become more prevalent as crowdfunding makes it mark on the world, leading to more available publications, studies, and resources to better understand how this field is evolving and defining itself. Due the relative infancy of this field, a broad range of areas related to CF demand study, as researchers are seeking to understand where CF plays its greatest role and where it is forming its footprint. Therefore, this literature review briefly touches upon a wide range of areas being impacted by CF to some extent.

Wheat, Wang, Byrnes, and Ranganathan (2013) indicate that crowdfunding may be applicable to scientific research, as funding has significantly reduced in recent years. According to the authors, funding from the National Science Foundation plummeted to below 20% in the years leading up to 2013 (Wheat, et. al., 2013). Further, even under ideal funding circumstances, there are many opportunities for scientific study and very few major channels for which funding can be obtained. Wheat, et. al. (2013) maintain that, "completing a crowdfunding project marks only the beginning of the relationship between scientists and the crowd" (p. 2). Therefore, scientists may be able to forge meaningful relationships between themselves and funders over time. Crowdfunding can also be a conduit for "encouraging scientific transparency," (Wheat, et. al., 2013, pg. 2) and creating better public understanding of what scientists do.

Agrawal, Catalini, and Goldfarb (2011) took a more focused look at crowdfunding, as they examined the geographic origin of consumers who invested in the ShellaBand platform. They found that spatial proximity plays a lesser role as evidenced by the average distance of 3,000 miles between artist-entrepreneurs and investors. However, they found that, "local investors invest relatively early, and they appear less responsive to decisions by other investors" (Agrawal et. al., 2011, n.p.). Crowdfunding affords the opportunity to unite potential funders from disparate areas of the world behind singular causes. Agrawal et. al. (2011) suggest taking a broader look at what distance means to such a campaign as well as study which metrics can be applied to understanding potential behaviors among donors from different geographic areas. They believe, as the study of crowdfunding grows over time, reliable tools for estimating will emerge based on this observation that funding amounts might change as distance increases.

Mollick (2014) further examined the role of geography in crowdfunding. Using data from Kickstarter, he examined the determinants of success in crowdfunding ventures, uncovering that

"a strong geographic component to the nature of projects, with founders proposing projects that reflect the underlying cultural products of their geographic area" (p. 2) lead to more successful projects. This study found that personal networks and underlying project quality are also associated with the success of crowdfunding efforts. Mollick's study (2014) supports the notion that distance is a key concept in examining the importance of crowdfunding in today's economy. Further understanding of how distance and geography affect CF may provide valuable insight on the execution of successful campaigns.

Kuppuswamy and Bayus (2013) also examined funded projects listed on Kickstarter and showed that social information (i.e., other crowdfunders' funding decisions) plays a critical role in the success of a project. Ahlers, Cummin, Gunther, and Schweizer (2012) stressed the importance of information going from the entrepreneur to the crowd. Using Australian data, they analyzed equity crowdfunding and presented evidence that successful crowdfunding initiatives rely on credible signals, quality of start-ups, and sound information disclosure to the crowd. Social media interaction of all types across all geographic areas are what become the interface between funder and funded, and therefore analysis of these transactions makes up an integral part of the study of crowdfunding.

Yeh (2015) studied 100,000 of Indiegogo's CF campaigns in an attempt to uncover and highlight any specific techniques which led to successful campaigns. This study found that out of all the campaigns that met their goals, 30-day campaigns appear to work the best with 30.5% running 30 to 39-day campaigns (Yeh, 2015). Other indicators for success include: adding new perks after launch date, team-based campaigners raised over 3 times as many funds than those who campaigned alone, and those with pitch videos raised 4 times more funds than campaigns without one. These findings appear to mirror similar trends occurring in the world of social

media. For instance, social media posts are most viewed when they are initially introduced to the medium, not a few months later. Another example is that social pages are viewed more frequently as updates are added. These closely resemble trends in CF today.

A study of 6,000 nonprofit websites through Directhelp.org discovered that the average age of online donors is 38, compared to offline donors whose average is over the age of 60 (Andersen, 2006). This could be a direct illustration of the inherent difference between the so-called millennial generation and previous generations. Younger consumers who have grown up with computer and social media technology may possibly be more inclined to become involved in online CF endeavors. This is certainly an avenue that demands more study and analysis.

2.1.2 Entrepreneurship

How does entrepreneurship intersect with crowdfunding? First, it is first necessary to define both entrepreneurship and social entrepreneurship. The popular notion of entrepreneurship is associated with simply starting a business, but it is better defined as "the capacity and willingness to develop, organize and manage a business venture along with any of its risks in order to make a profit" (Businessdictionary.com, n.d.). Even though the process of starting a business encompasses a certain level of entrepreneurial skill, true entrepreneurs do more than just provide a product or service. Most entrepreneurs have received some form of training and engaged in practice to hone their skills, which disproves the fallacy of entrepreneurs being born with such entrepreneurial ability. Therefore, entrepreneurship is a mindset or a way of thinking that enables an individual to create an opportunity with the means of bringing it to market for financial gain (Sinclair, 2014). Applying this mindset to unique ventures for the greater good of society has led to the field of social entrepreneurship. Whether it is starting a

business or nonprofit organization, the social entrepreneur seeks opportunities with financial profit to solve social problems.

Entrepreneurship, in general, greatly influences all aspects of everyone's daily lives and will continue to do so as entrepreneurs exploit new ideas and opportunities. Social entrepreneurs uniquely solve problems that impact society through a number of social ventures. These individuals become agents of change by creating nonprofits, enhancing existing organizations through new innovations, or developing new products or services for transforming a significant portion of the population. Social entrepreneurs are not necessarily motivated by financial gain, but rather by the ability to envision their opportunity and witness its fruition, which targets an "underserved, neglected or highly disadvantaged population that lacks the financial means or political clout to achieve the transformative benefit on its own" (Marten & Osberg, 2007, p. 35). Regardless of motivation, however, anyone who works to create new solutions to social problems successfully can be considered a social entrepreneur.

The theory of social entrepreneurship describes the specific path that an entrepreneurship or traditional business may have chosen to take to be socially responsibly. Typically, most people quickly associate nonprofits with a true social venture; however, such a blanket statement should not be made. Even though nonprofits have an agreement with the government to use its revenues for the greater good of society, not all function in this manner. Nonprofits status allows organizations to financially compensate higher-level executives with hefty bonuses for jobs well done, which lessens the available funding for society (Sinclair, 2014). On the other hand, the for-profit organizations tend to not be considered social ventures, which is a misconception, as they have the option to allocate funds for the betterment of society.

2.1.2.1 Today's Society and Social Entrepreneurship

Entrepreneurship is key towards embracing new technology-driven innovations such as CF and all of its variants. Entrepreneurship contributes to 20-40% of the overall labor productivity growth in the eight major industrialized countries according to the Organisation for Economic Co-operation and Development (OECD) (Berglann, Moen, Roed, & Skogstrom, 2011). This is just a portion of the overall impact of entrepreneurship in today's market. In embracing traditional U.S. capitalistic ideals, the work of entrepreneurs has a leveling effect on larger corporate entities, preventing them from obtaining monopoly status on an industry.

Entrepreneurs may have more hurdles to overcome to compete against the multinational organizations. However, the successful entrepreneur can provide new and better ideas than established organizations. Across industries, a number of entrepreneurs have left lasting footprints with the emergence of new products or services or even redevelopment of existing models, goods, or services that are more efficient or cost-effective. The same argument can be made for social entrepreneurship, which is the application of the entrepreneurial mindset to social ventures for the betterment of society. According to McKinsey & Company (2013), our society is experiencing an "explosion of creativity in social entrepreneurship" through a number of entrepreneurial start-ups that can deliver value to society (2013, n.p.). These social entrepreneurs are developing innovative methods for blending traditional capitalism with solutions that address the longstanding needs of our planet and civilization.

Many factors play a critical role in developing and implementing a successful social entrepreneurial venture. Alvord, Brown and Letts (2004) identify three major innovation approaches: building local capacity, disseminating a package, and building movement (p. 279). These simple terms refer to a broad area of influence and expertise that must be exploited

in order to be a true catalyst for social transformation. Developing an understanding of the community, working with them, and embracing their values in order to understand what is truly important to them is the bedrock for being able to use entrepreneurial skills to create new and positive solutions to their issues. Social ventures serve poor or marginalized populations by engaging local groups to help identify and build upon capacities, through delivering products or services, and mobilizing grassroots alliances for advocacy.

The advancement of these initiatives is contingent upon a leader that has the right background and expertise to understand and work efficiently with all stakeholders that are integral to the organization's strategy as well as build relationships among a number of other key players that are critical to the initiative. With the right leadership, social ventures can produce sustainable changes by "developing strategies for overcoming challengers and strengthening allies" to further maximize their impact (Alvord, Brown & Letts, 2004, p. 280). This kind of leader is the social entrepreneur: someone who can create change in new ways, and in doing so, lead the way to the future.

Opportunity recognition is central to venture creation and an important element of entrepreneurial thinking (Lehnor, 2013). Communicating opportunities to a large number of diverse people utilizing a variety of strategies and methods of delivery is key to entrepreneurship. As catalysts for societal transformation, social entrepreneurs inherently act to seek novel opportunities by which to solve any number of social problems. These agents of change embark on a number of social ventures through the creation of nonprofits, enhancement of existing organizations through new innovations, or development of new products or services. They can even work within the confines of corporate culture as long as they remain focused on creating change for social good, regardless of the arena. The rise of the social

entrepreneur in today's society has created a need to better understand why these entrepreneurs do what they do and how they impact ventures in their entirety as well as how they fund such endeavors.

It is critical to understand that nonprofits are driven by a mission to create value by meeting the needs of societal problems, which differentiates them from for-profit organizations. As nonprofits compete in their field for limited funding and market opportunities, the social entrepreneur must adapt their mindsets accordingly to overcome these barriers as they seek innovative methods for solving such unique issues. CF provides these social entrepreneurs and leaders with a new method for generating revenue to support these social initiatives as well as offer online platforms to reach a broad audience while soliciting funding.

2.1.3 Leadership

Leadership is a constantly evolving, dynamic field. However, even as technologies and modes of delivery change, the concept of leadership remains the same: leaders must be able to inspire followers to help them achieve their goals. This can be achieved by a variety of means, but much of it has to do with the success of the leader. Similarly, in recent times, the notion of what constitutes a workplace has changed dramatically. The growing shift from production to service-related industries has resulted in a new generation of employees: knowledge workers not bound to physical work locations. As a result, the organizational structure of virtual teams has emerged as well as a new set of challenges to coordinate job roles, functions, and tasks across time zones, physical boundaries, and business practices (Kayworth & Leidner, 2002). With the advancement of information technology (IT) in organizations, there has been a marked change in

both the nature of the workplace and in the delivery of leadership systems, resulting in the relatively new field of e-Leadership (Avolio, Kahai, & Dodge, 2000).

Information technology has altered the methods of how information is "acquired, stored, interpreted, and disseminated" which "alters how people are influenced and how decisions are made in organizations" (Avolio & Kahai, 2003, p. 327). People can avoid face-to-face communications in the offices of today because of the proliferation of electronic communication tools. Today, communication can happen through e-mail, online collaboration, or even a mobile device, regardless of how short the distance.

With the rapid advancements of technology, constant connectivity has become the standard expectation not only in the business world but in the everyday lives of consumers. Ideas can be shared in a matter of seconds via social media reaching people in different cities and different countries instantaneously. With the increase in speed connected to the discussion of ideas, there should be an increased focus on the speed of the implementation of that idea. Crowdfunding platforms offer the ability to rapidly create a project or campaign to fund and materialize these ideas. Capital is essential to launching any new product or service and CF is a way to acquire that capital, while reaching out to target markets, giving the consumer a chance for input. Consumers are now empowered to a level that they were not traditionally accustomed. With real-time communication and a democratization of the access to information, a newly informed public has questions that cannot be ignored. "Technology has provided customers with the means to build community and gain power, thus altering the balance in the 'leader-follower-customer' equation" (Aviolo & Kahai, 2003, p. 328).

2.1.3.1 What is e-Leadership?

With crowdfunding being so driven by technology and so adaptable to geographic diversity, it is a ripe field for the development of e-Leaders. Society has evolved into a cyber-community that encompasses many consumers and sellers, and moreover, requires that many businesses operate under the cyber realm to satisfy its consumers. As a result, there has been an emergence of businesses that are Internet-based and cyber-located, which demands a new type of leader. Because of these factors, the advent of e-Leadership was inevitable. e-Leadership is similar to traditional leadership styles but requires e-Leaders to operate more efficiently than those under the traditional modes of conducting business.

Avolio, Kahai, and Dodge (2000) define e-Leadership as a "social influence process mediated by AIT [advanced information technology] to produce a change in attitudes, feelings, thinking, behavior, and/or performance with individuals, groups, and/or organizations" (Avolio, et. al, 2000, p. 617). It can occur in a multitude of facets of an organization: one-to-one and one-to-many interactions within and across departments or units. Leadership can be delivered in many forms. However, the changes in how communication occurs in business and in organizations, leadership styles must adapt not only to the channels for communications, but to the changes in communication styles and methods as a result of these changes.

2.1.3.2 Supportive Theories of e-Leadership

One theory that supports the notion of e–leadership is the Adaptive Structuration Theory (AST), introduced by Avolio and Kahai (2003). This is a theoretical framework that "captures the view that technology and organizational structures influence each other" (Avolio, et al., 2000). This theory explains the process of how people incorporate AIT into their work as well as

the consequences of these decisions. Structures, such as rules and resources, guide human action and serve as guidelines for planning and accomplishing tasks. They define context by outlining the attributes of the physical and social systems in which the group functions. The structures of AIT are comprised of structural features and the spirit of these features. Structural features are the actual design characteristics that direct how information is collected, manipulated, and managed by users, whereas the spirit refers to the intent or purpose of the inclusion of structural features.

This theory also suggests that technology and leadership, in essence, directly impact each other. For instance, Avolio and Kahai (2003) suggests that technology creates organization structures of which leadership is a part, but at the same time, these organization structures continue to be transformed by the impact of leadership and technology. They posit that as technology shifts, so do leadership methods and practices, which has been demonstrated in the shift of the global society to email. When email was adopted, there was a shift and minimization on the part of many leaders to engage in face-to-face interactions with staff, administration, and clients. Email became the new method of communication and due to its dependability (which can be linked to the constant technological advances of email), it has witnessed an increased use throughout a global society. Leadership and technology, therefore, enjoy a recursive relationship, each affecting and at the same time being affected by the other; each transforming and being transformed by the other.

"Transformational leadership occurs when leaders broaden and elevate the interests of their employees, when they generate awareness and acceptance on the purposes and missions of the group" (Kirkpatrick & Locke, 2010, p. 104). These types of leaders inspire change by being charismatic leaders, who lead with self-confidence and who in turn inspire this same confidence

among his/her team; believing that changes in organizational culture involves change in team members; and having the ability to articulate their vision and make the vision a collective one. According to Kouzes and Posner (2010), exemplary leaders know that if they want to gain commitment and achieve the highest standards, they must be models of the behavior they expect of other. Leaders model the way. They further state that leaders inspire shared visions, challenge the process, enable others to act, and encourage the heart (Kouzes & Posner, 2010).

"Enabl[ing] others to act," is a powerful and important skill for leaders and entrepreneurs to utilize. A leader who has had negative interactions with their team and who has fostered a sense of distrust puts himself at a disadvantage. A leader who can mandate duties amongst their peers without protest, and with conviction, can be more successful heading a team, and can be viewed as a passionate advocate for their cause. Society tends to follow the passionate over the lackadaisical. It must be understood that a manager can be a leader, but a leader does not necessarily have to be the manager. From a CF standpoint, a passionate team leader can motivate their staff as well as the customer willing to contribute to the idea. Yeh conducted research on 100,000 Indiegogo projects and found that a CF campaign run by a group outperformed those operated by individuals (2015).

Similar to all others types of leaders, e-Leaders must be able to inspire, motivate, and engage. These leaders have the tall order of bridging several gaps between diverse groups of people. Annunzio (2001) utilized the scenario of a leader showing up to the office one morning to find no employees to demonstrate how the e-Leader's need to generate inter-generational cooperation (referring to cooperation between members of what are commonly referred to as the baby boom generation and generations X and Y). This scenario places a better understanding on the necessity of e-Leadership to be both excellent in e-Leadership but transformational at the

same time (Annunzio, 2001). e-Leaders are required to encompass transformational skills in essence at higher degree than traditional leaders. They must have the ability to inspire individuals of diverse ages, cultures, races, religions, and socializations. However, they are challenged to do so without placing a face to those in which they are called to inspire.

Therefore, leaders, particularly e-Leaders, must critically examine and successfully collect, assimilate, and interpret vast amounts of information. They must inspire, motivate, reward, review, transform, and alter behavior, just as those in traditional leadership roles. "These demands are greater than ever today because of rapid technological change" (Kirkpatrick & Locke, 2010, p. 106). IT has altered leadership through a number of methods: (i) easier access to information and media; (ii) greater interconnectedness in the workplaces; (iii) easier methods of contacting one another; and (iv) communication is more permanent than ever (Aviolo & Kahai, 2003). Therefore, it is in essence vital for them to be transformational in all capacities.

2.1.3.3 e-Leadership and Building Trust in Virtual Teams

Leaders will need to spend more time on building relational development in virtual teams than typically necessary in the traditional team. "Trust is a very critical for a virtual team to function and excel" since direct supervision and a shared form of control are not feasible (Avolio & Kahai, 2003, p. 335). There are three dimensions to the concept of trust: (i) relationship between the truster and the trustee, (ii) psychological trait of the truster, and (iii) cultural context (Harrell & Daim, 2009). Understanding these dimensions and how they affect relationships within a group environment will enable a leader to build trust among team members. The effects of leadership on trust should not be undervalued. Leadership in this context is transformational; it will need to instill confidence among the virtual team members in regards to their ability to

perform by (1) individualized consideration, whereby the leader considers and encourages consideration of input provided by every member of the team, and (2) inspirational motivation, where the leader communicates confidence in the ability of the whole team to accomplish a task that all members can relate to (Avolio et al., 2000).

Lewicki and Bunker (1994) have proposed a three-stage model for developing trust in e-teams: (i) the development of calculus-based trust, (ii) the emergence of knowledge-based trust, and (iii) the development of identification-based trust. The first stage includes team members behaving in the same mannerisms during various team situations. Newly founded team members realize they can gain from working with one another and the leader should be able to emphasize this need for this team and how all parties can benefit from it while achieving the team's goal(s). As individuals familiarize them with their skill sets, resources and problem solving strategies, the second stage emerges and team members can anticipate one another's behavior due to this increased level of comfort and understanding. Finally, the third stage is reached when team members recognize their shared values, goals and intentions for themselves and the organization. "They trust each to act at different times as a representative of, or an agent for, the team as a whole, an entity they all come to identify with over time" (Zigurs, 2003, p. 345). Building identification-based trust is more essential for e-teams due to the dispersion of the team and the greater possibility of one member being called upon to represent the whole at any given time.

It is essential for e-Leaders to facilitate with the process of trust from calculative to identification trust in addition to amending any rifts in the team trust. e-Leaders can take the following steps to promote trust:

- Consistent flow of e-mail communication
- Establish the norms of the group (standard operating procedures)

- Define clear roles and expectations for all members

- Provide prompt feedback

- Maintain records of all communication

- Encourage sharing of personal information

- Clarify purpose for team action

- Promote a collective identity for the team

- Assist with support for reestablishing trust (Zigurs, 2003)

Almost as important as building trust as a leader, is maintaining that trust. Trust is like an antiquity. It may take a long time to acquire, and even after its gained, its still delicate. As a leader, one must be able to create "buy-in" among the staff. Transparency and honesty aid in the maintenance of trust and camaraderie between the leader and the followers.

Both e-teams and traditional teams are anticipated to adjust rapidly to changing situations. According to Zaccaro and Bader (2003), "truly effective teams are those that are able to maintain high performance, even as team circumstances become decidedly adverse" (p. 379). Therefore, teams must work together to promote individual and collective adaptability. Establishing standard operating procedures and acceptable methods for interactions helps foster trust among the group. If time allows, it is recommended for e-teams to go through the stages of groups: "forming", "storming", "norming", "performing", and "adjourning". Unfortunately, virtual teams may be brought together for short-term projects and there is not a sufficient amount of time to undergo these stages, which may result in a lack of productivity or efficiency within the group (Zaccaro & Bader, 2003, p. 382). However, e-Leaders must take the initiative to ensure that virtual teams share similar experiences to those of traditional teams in order for them to be effective.

2.1.3.4 e-Leaders Today

In today's environment, leaders can lead projects from a distance. Not only this, but they can be on-site and still provide communication through web-based platforms. Leaders can lead entire projects using these methods, and in fact, these methods have become preferable for some leaders. The incredible speed and large user bases for these platforms has encouraged this type of interaction, and many younger employees new to the workforce may be more comfortable with this type of interaction than any other (Avolio & Kahai, 2003).

However, does this diminish the effectiveness of leadership? Zimmerman, Wit, and Gill (2008) ask, "Does the change from a face-to-face work environment to virtual settings...require that leaders pay more attention to particular communicative behaviors to influence the members of their team?" (p. 321). In other words, has the power shifted from the leader to the follower in terms of making projects happen using e-Leadership? According to Zimmerman, et al. (2008), there are several behaviors that have been deemed more important in online interactions than with face-to-face communication. Losing the face-to-face interactions takes away some of the most powerful components of speech: tone and emphasis. This is an interesting development because it has basically confirmed an idea that e-Leadership is harder for leaders than traditional methods.

The interactions, including "stimulating information sharing", "encourag[ing] the use of different computer-mediated communications", and "prevent[ing] misunderstandings", (Zimmerman, et.al., 2008, p. 328) were seen as much more important for leaders to engage in by the group that was studied. Therefore, more work is required of leaders in mediating the actions of the followers through e-Leadership that was ever required in traditional face-to-face systems. This would imply that while it may seem to the layperson that managing a project remotely may

be easier, the case is actually that team members have much higher expectations of a remote

manager. This leader will have much more work to do in terms of inspiring their followers and

will have a daunting task ahead of them as they attempt to assert their leadership in their

organization.

2.2 Conclusions from CF, SE, and Leadership

Crowdfunding, social entrepreneurship and leadership: three concepts that find

themselves increasingly more linked in today's marketplace. As traditional funding models dry

up in response to fiscal constraints, successful leaders are forced to use innovative and non-

traditional social entrepreneurial tools in order to bring their goals to life. One of these new tools

is crowdfunding. Crowdfunding thrives in a social entrepreneurial arena because it can be used

to further social program goals (among others) and represents the pinnacle of forward-thinking

thought and successful use of social technological web-based tools to make the most impact.

These kinds of ventures require leaders.

What kind of leaders are needed for ventures such as crowdfunding? Traditional

leadership traits are always in demand. But, due to the unique nature of this type of electronic-

based web outreach, e-Leadership of geographically diverse teams can be utilized for maximum

effect. Now, leaders can choose the level of their outreach: be it local for more locally-minded

efforts, nationwide, or worldwide. No market is too big, too small to be effectively managed

from any location imaginable, and mobilizing any team no matter how scattered around the

globe. The only link between them need be a shared commitment to the cause.

Chapter 3. Methods

3.1 Research Design

As an exploratory study, the goal of this paper is to develop an initial understanding of financial success metrics of crowdfunding for nonprofit projects. To do so, a case study of Kickstarter was selected and four steps were performed on the associated data: (i) acquisition (ii) exploration, (iii) standardization, and (iv) analysis (**Figure 8**).

Figure 8.
Overview of the Study. Four steps were performed: (i) nonprofit project data was acquired from the Kickstarter website, (ii) data was then explored using descriptive statistics and visualized by histograms and box plots through R package statistical software, (iii) outliers were removed, and (iv) data was then analyzed by statistical models: two-sample t-test and logistic regression.
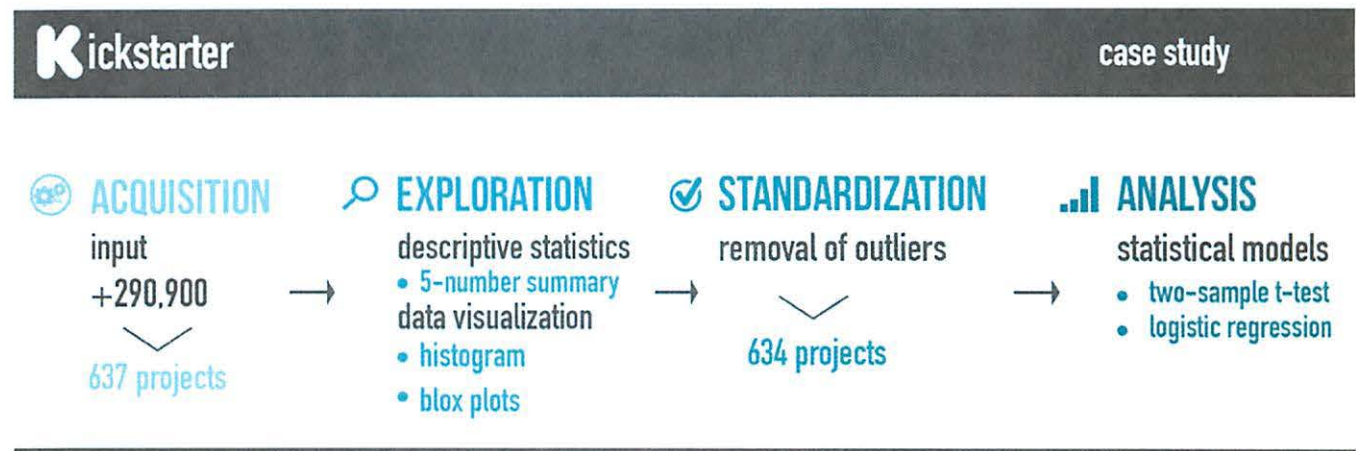
3.2 Datasets

This dataset was generated from the Kickstarter website on March 24, 2016. Utilizing a custom-built API (application program interface) tool to query the data, the following six keywords were searched: nonprofits, non-profits, not-for-profit, 501c3, 501(c)3, and 501(c)(3). Querying these keywords, the API tool populated six CSV (comma separated values) files that were aggregated using R statistical software, which is a language and environment for statistical computing, data manipulation, calculation, and graphical display (R Core Team, 2013). Duplicates were removed for a total of 637 unique nonprofit projects.

3.3 Measures

This case study evaluates 12 variables form the Kickstarter data, as shown in **Table 2** below. These variables were freely available on the discover page of Kickstarter's website. The researcher was able to use existing information provided by the organization in order to determine metrics that would be appropriate for the study. Variables were selected based on their possible importance to CF ventures. All descriptive data related to the project and any financial information was considered to be potentially informative for the study.

Table 2.
Description of variables. Variables from Kickstarter data selected based on relevance to CF.

Variable	Description
name	Short name for the project
category	Self reported category for the project
created	Launch date of project
state	Status of project [canceled, failed, live, successful, suspended]
location	Location (city, state or country) of project
deadline	Last date of pledging
blurb	Longer description of project
currency	Type of money raised
goal	Amount of funding sought
pledged	Amount of funding promised
backers	Number of financial supporters
duration*	Length of funding cycle

* derived variable calculated from *deadline* minus *created*

3.4 Hypotheses

Three hypotheses were developed and tested during this study. The researcher decided upon testing these hypotheses after a thorough review of the literature concerning CF as well as a review of the current state of the field.

Hypothesis #1 - The average time duration of the successful funding projects is different for failed projects.

Hypothesis # 2- The average goal of successful projects is different than the goal of failed projects.

Hypothesis #3 – The utilization of crowdfunding has increased in prevalence in recent years.

3.5 Procedures

Each variable was numerically and graphically summarized using R statistical software. In the course of this exploratory data analysis, outlier projects were removed and distributions of the measures (**Table 2**) were examined. Hypotheses were generated throughout the exploration of quantitative relationships during the exploratory period at the beginning of the study. Since much of the data was available from Kickstarter and free of charge, the researcher was able to freely browse the data and develop hypotheses based on what was available.

3.6 Data Analysis

Categorical variables, such as *category*, *state*, and *location* were tabulated to provide counts of nonprofit projects within distinct subcategories. Quantitative variables, such as *goal*, *pledged*, *backers*, and *duration*, were summarized using standard description statistics including

five-number summary and mean and standard deviation (**Table 3**). These numerical variables were visualized using histograms, and relationships between categorical and continuous data were explored graphically through side-by-side boxplots. For example, the *state* variable was compared with the amount *pledged*. In the course of this visualization, one outlier project was removed for having an unrealistic goal of $50,000,000, much larger than the next highest *goal* of $100,000. Two other projects were removed, as they were the only projects in a 'suspended' status. Further, projects that were in a 'live' *state* (n = 16) or 'canceled' *state* (n = 57) were not of key interest and excluded during inferential procedures to obtain greater interpretation and statistical power.

After the removal of the three outliers, the reduced dataset contains 634 projects. All descriptive statistics were produced on this smaller dataset. The inferential procedures, a two-sample t-test and logistic regression model, were employed on a further reduced data set including only 'successful' (n = 244) and 'failed' (n = 317) nonprofit projects. Inferences were made with respect to 'successful' vs. 'failed' *state*, with the goal of finding relationships between the other variables and fully funded projects.

Table 3.
Five-number summary descriptive statistics. Output of descriptive statistics for goal, backers, pledged, and duration.

| Variable	Min.	1st Quarter	Median	3rd Quarter	Max.	Mean	Std. Dev.
goal	41	2,000	5,000	15,000	1,000,000	20,300	58,642
pledged	0	32	590	3,720	215,000	5,580	17,147
backers	0	2	11	49	2980	63.8	216
duration	5	34	50	73	1090	74.1	93.29

Chapter 4. Results

4.1 Descriptive Data

The 634 projects were investigated by current *state*, launch year, and then by count of success vs. failure per year (**Figure 9**). Overall, approximately 240 projects have successfully been funded (**Panel A**). The number of nonprofits launching projects has steadily grown from 2009 to 2015, with over a 60% increase from 2014 to 2015 alone (**Panel B**). The count of successful projects has increased from 2009 to 2011, however, the rate of success peaked in 2012 with 63.4%, but declined the next three years (51.3%, 2013; 34.5%, 2014; 30.3%, 2015) (**Panel C**).

Figure 9.
Descriptive data of 634 projects. Illustration of descriptive statistics by state (Panel A), created, (Panel B), and count of success vs. failure by year (Panel C).
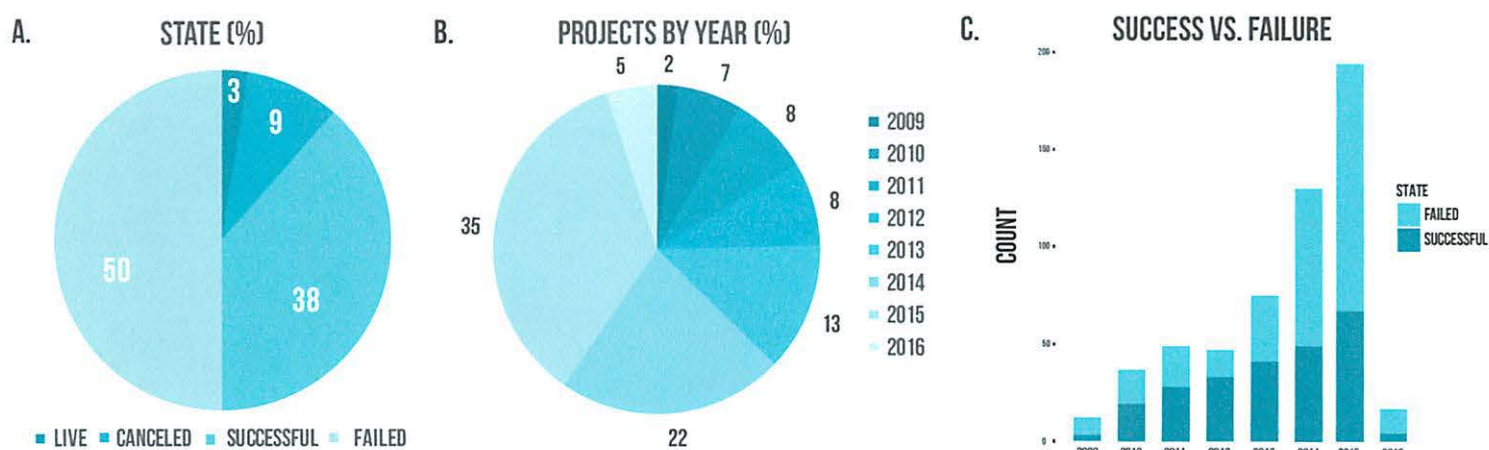
Project *goal and pledged*

Projects with funding goals and pledges in non-US dollars were historically converted to USD using the date of the project deadline (OANDA Corporation, n.d.). The *states* of the projects were compared to both *goal* and *pledged* using box plots and log transformed for ready visualization of distributional characteristics (**Figure 10**). Note that without logarithmic

transformation many outliers in the right tail (positive values) were observed and variation

within the majority of observations could not be seen.

    The distribution of project funding goal for each project state appears fairly similar in

shape and central tendency (**Figure 10, Panel A**). There is not much skew but some *states* have a

fair amount of outliers without log transform. It appears that the median goal of successful *state*

($10,765) differs from the other project *states* ($28,237). This box plot visualization affirms the

hypothesis funding goals of successful projects are less than those of failed projects goals.

Figure 10, Panel B illustrates the *state* of the projects in comparison to *pledged* dollars. The

average amount of *pledged* monies for successful projects is $12,933.

Figure 10.
Box plots describing the *state* of the project vs. the (log) *goal and state* of the project vs. (log) *pledged*.
Visualization of goals and pledged dollars by state of the projects.
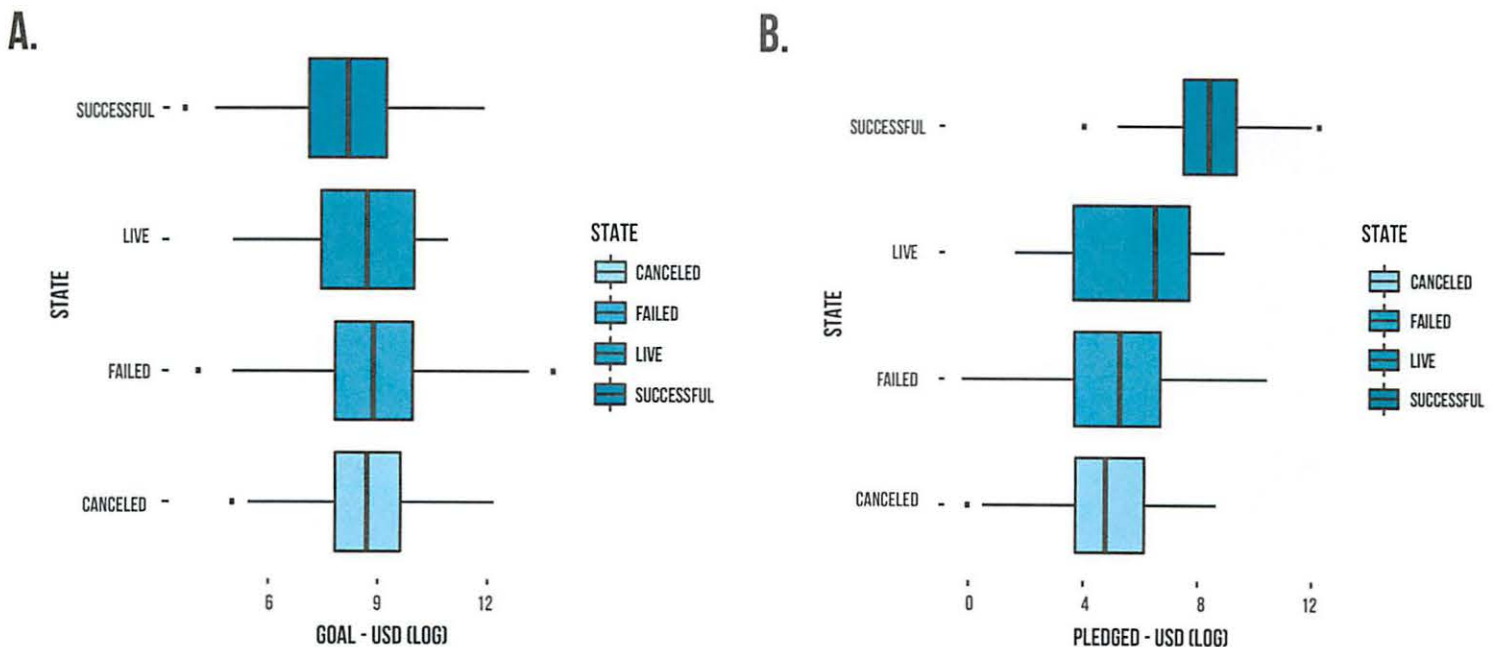
Project *duration*

Duration was calculated from the dates of the variables *deadline* minus *created*. The *states* of the projects were compared to *duration* using box plots and log transformed for to allow for visualization of distributional features in the presence of outliers and heavy skew (**Figure 11**). The distribution of project *duration* in days for each project *state* appears fairly similar in shape and central tendency. Several outliers exist for projects that lasted much longer than the majority of projects within their state.

Figure 11.
Box plot visualization of *state* of the project vs. (log) *duration*. Visualization of project duration by state of the projects.
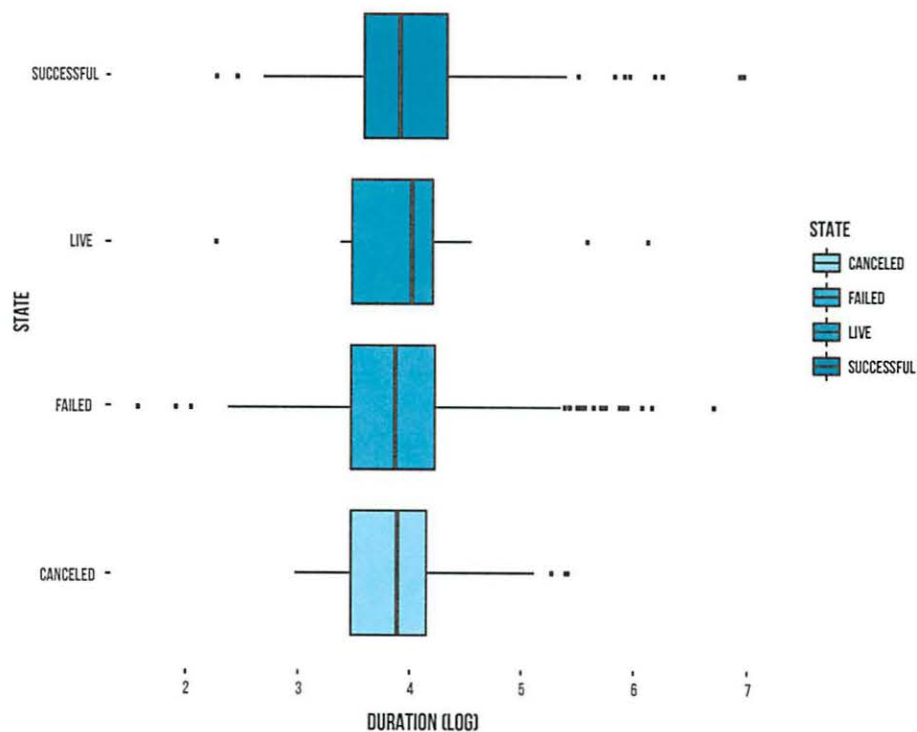

Category

The self-reported categories of the 634 projects were re-organized into five categories: arts, film/media, food, technology, and other. **Figure 12** visualizes the count of success vs. failure state by each category. Arts is the largest category with a total of 251 projects; however,

only 66 were successfully funded. The most successful category, food, has 39 successful

projects in comparison to the 9 failed.

Figure 12.
Count of success vs. failure by category. Illustration of failed vs. successful projects by category of
nonprofits.
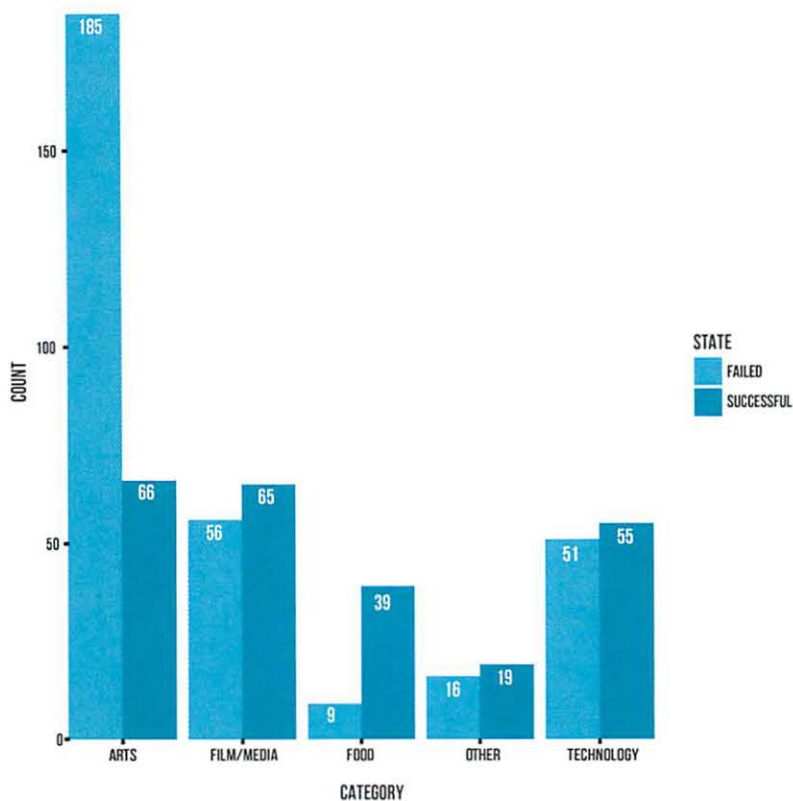
4.2 Inferential Data

Two-sample t-tests

A two-sample t-test was constructed to test the research hypothesis of the amount of

goals for successful nonprofit projects (μ_S) being different than those of failed nonprofit projects

(μ_F). The statistical hypotheses for this test are:

$$H_0: \mu_S = \mu_F$$

$$H_1: \mu_S \neq \mu_F$$

The p-value of 0.00018 indicates there is strong evidence of a difference in average project goals for successful and failed projects. Note, a Welch's t-test was applied to allow for inconstant variance between the two groups (Welch, 1947). This is apparent in a large difference in sample mean goals of $10,765 and $28,237 for successful and failed projects, respectively.

A two-sample t-test was also constructed to test the hypothesis of project durations of successful projects (μ_S) being different than those of failed projects (μ_F).

$$H_0: \mu_S = \mu_F$$

$$H_1: \mu_S \neq \mu_F$$

The p-value of 0.39 indicates little evidence of a difference in mean durations between the two project states. Despite the sample mean duration being slightly higher for the successful projects (Mean number of days for successful projects = 79 vs. mean number of days for failed projects = 72 days), there is no statistically significant evidence that there is a difference in average duration.

Logistic regression model

Logistic regression was used to obtain the odds ratio (OR) of successful versus failure in the presence of more than one explanatory variable (**Table 4**). The result is the impact of each variable on the odds ratio of the success or fail of the project. This model avoids confounding effects and estimates effect sizes simultaneously by analyzing the association of all expert-selected variables together (McCullagh, 1989). By fitting a linear regression line, this model provides an understanding how a unit change (slope) in a quantitative variable impacts the overall outcome of success.

For every unit increase in log(goal.usd), the odds of success decrease by 9%. Further,

ORs for subcategories of categorical variables are compared to a baseline group. For example,

Technology, as compared to Arts, is twice as likely to have an outcome of success.

Table 4.
Results from logistic regression model containing all explanatory variables. Output data from logistic regression model.

	β estimate	OR	p-value
Intercept	-1.56e+02		.5368
Log(goal.usd)	-2.43e+00	.088	4.1e-15
Log(backers +1)	3.79e+00	44.26	<2e-16
Duration	-1.24e-03	.998	.6502
Created	8.10e-02	1.08	.5186
Film/media	1.33e+00	3.77	.0250
Food	2.84e+00	17.2	.0007
Other	9.30e-01	2.53	.4112
Technology	6.39e-01	1.89	.2567

As shown in **Table 4**, the p-value for several of the categories fall below the threshold for

statistical significance (.05). The categories of *goal, backers, film/media,* and *food* were all

found to be statistically significant. From this, it can be inferred that these results will lead to a

rejection of the null hypothesis and are not the result of a sampling error. These variables are

related to the success or failure of any such CF initiative.

As Film/Media and Food are statistically significant, they were compared to the control

case of Arts (**Tables 5 and 6**). These two-by-two contingency tables further elucidate the

results from the logistic regression:

Table 5.
Comparison of Arts (control) vs. Film/Media (case). Two-by-two contingency table illustrating the comparison of film/media to arts as well as OR and p-value.

	Success	Failed	Total
Arts	66	185	251
Film/Media	65	56	121
Total	131	241	372

OR=0.31 p-value = P < 0.0001

Table 6.
Comparison of Arts (control) vs. Food (case). Two-by-two contingency table illustrating the comparison
of Food to Arts as well as OR and p-value.

	Success	Failed	Total
Arts	66	185	251
Food	39	9	48
Total	105	194	299

OR=.0823 p-value = P < 0.0001

Chapter 5. Discussion

5.1 Findings of the Study

This study found that there are several variables that must be considered before embarking upon a CF initiative of any type. Factors, such as the set goal, the targeted backers, and project category can have a profound impact on the success or failure of the initiative. As **Table 4** illustrates, several categories were found to show statistical significance to CF, including goal, backers, film/media, and food. Findings related to this study's original hypotheses are as follows:

Finding One (reject first hypothesis) - The average time duration of the successful funding projects is not different for failed projects.

Finding Two (accept second hypothesis) - The average goal of successful projects is different than the goal of failed projects (in fact the goal is smaller for successful projects)

Finding Three (accept third hypothesis) – The utilization of crowdfunding has increased in prevalence over the last few years. This was not formally tested during the research process. Though the researcher did not formulate a third hypothesis regarding the current state of CF, a review of current state revealed an increasing prevalence of CF in nonprofit social entrepreneurial fundraising.

5.2 Limitations

One of the major limitations of this study is the source of data. This study only utilized data from Kickstarter and there are a multitude of other crowdfunding platforms, which could provide a greater insight into crowdfunding and how well it works for a myriad of business ventures including other nonprofits. The variables provided from the Kickstarter website for

these projects may also have limited the study. Additional examination of the projects beyond the cursory information available may offer valuable insight for identifying other success metrics. Further, openly accessible data from online crowdfunding platforms is not readily extractable or easily attainable.

Another limitation of this study was the non-testing of our third hypothesis. The third hypothesis asserted that CF endeavors have increased in prevalence during the last few years. This was found with anecdotal information, and further testing should be done.

5.3 Future Studies

Potential future studies into CF would analyze data across multiple fundraising platforms and determine trends among and between the major venues. This could only be accomplished if data from across these platforms were to be made available. Sustainability of successful projects may be of key interest when conducting future studies. Further research could also look into comparisons and contrasts between technology-driven CF and more traditional forms of fundraising to determine over time if these new models are replacing the non-technology driven models that have existed previously.

Other potential future directions can include qualitative studies. Interviews with senior officials from CF organizations as well as documented experiences from users of CF for nonprofit social entrepreneurial ventures would fill a notable gap in the research. There are few exhaustive qualitative studies of CF in this context, and as they appear to increase in prevalence, the need for this type of research will only grow.

6. Conclusion

This study provides a preliminary understanding of success metrics for nonprofits' use of crowdfunding platforms, such as Kickstarter, as a viable financial model. This study adds to the literature on social entrepreneurship and use of crowdfunding initiatives in the nonprofit sector. The results of this study have demonstrated that much planning is needed before an organization embarks on a crowdfunding venture. Organizational leaders should consider many different variables and how they have an effect on the overall success or failure of a project. These considerations can guide organizational leaders in developing strategic plans that are built around a realistic goal as well a category that appeals to potential supporters.

Several hypotheses were formulated during the process of this study: (i) the average time duration of the successful funding projects would be less than those of failed projects, (ii) the average goal of successful projects would be less than those of the failed projects, and (iii) the utilization of crowdfunding has increased in prevalence in recent years. The results of the research found that project duration does not affect the outcome, whereas goal amount does attribute to a successful outcome. Based on the descriptive data, the number of projects launched by nonprofits has increased over the years. Additionally, statistical significance was found in several explanatory variables, including goals, backers, film/media and food. The final results of this study were that the pre-planning of crowdfunding ventures is of key importance to ensuring the success of the enterprise.

There exists opportunity for further research in this field. This study helps fill in the gap in the research and literature regarding crowdfunding in the nonprofit sector, but there still remains a gap with regards to studies over longer periods of time and over many more differing crowdfunding platforms. As CF in the nonprofit sector increases in prevalence, so too will the

need for continued research in the field. The definition of CF will likely change and expand over

time to encompass more fields and industries and to embrace new and ever-evolving types of

technology. This potential for change in technology can allow for novel methods and

approaches towards CF which will, in turn, merit further study.

Chapter 7. Implications of the Study

This study serves to fill a gap in the research over this relatively new phenomenon of CF. The hope is that this study and the tools developed within will serve as a springboard into continued, in-depth research into CF. This research may lead to improvements in service, better analytics of the data provided, and better tools for potential fundraisers for making informed decisions on how to best utilize CF for nonprofits.

CF is still an evolving field. There is likely to be more research on this field in the future, and many of the themes explored in this study may be expanded upon. However, this study will add to the current literature and has the potential to guide future studies into CF.

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