Spring 3-19-2020

Role of Social Capital in Crowd Funding Campaigns: Exploring Factors That Fuel Success in Crowd Funding Campaigns

Babu V. Manikandan

PERMISSION TO BORROW

In presenting this dissertation as a partial fulfillment of the requirements for an advanced degree from Georgia State University, I agree that the Library of the University shall make it available for inspection and circulation in accordance with its regulations governing materials of this type. I agree that permission to quote from, copy from, or publish this dissertation may be granted by the author or, in her absence, the professor under whose direction it was written or, in his absence, by the Dean of the Robinson College of Business. Such quoting, copying, or publishing must be solely for scholarly purposes and must not involve potential financial gain. It is understood that any copying from or publication of this dissertation that involves potential gain will not be allowed without written permission of the author.

Babu V. Manikandan

NOTICE TO BORROWERS

All dissertations deposited in the Georgia State University Library must be used only in accordance with the stipulations prescribed by the author in the preceding statement.

The author of this dissertation is:
Babu V. Manikandan
9904 Dew Cove
Cordova, TN 38016-1680

The director of this dissertation is:

Yusen Xia
J. Mack Robinson College of Business
Georgia State University
Atlanta, GA 30302-4015

Role of Social Capital in Crowd Funding Campaigns: Exploring Factors That Fuel Success in Crowd Funding Campaigns

by

Babu V. Manikandan

A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree

Of

Executive Doctorate in Business

In the Robinson College of Business

Of

Georgia State University

GEORGIA STATE UNIVERSITY

ROBINSON COLLEGE OF BUSINESS

2020

ACCEPTANCE

This dissertation was prepared under the direction of the *BABU V. MANIKANDAN* Dissertation Committee. It has been approved and accepted by all members of that committee, and it has been accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Business Administration in the J. Mack Robinson College of Business of Georgia State University.

Richard Phillips, Dean

DISSERTATION COMMITTEE

Dr. Yusen Xia (Chair)

Dr. Baozhong Yang

Dr. Peter Zhang

DEDICATION

I dedicate this work to my wife and children; without my family's support, this work could not have been completed successfully. With much appreciation, I also dedicate this work to my cohort at Georgia State's EDB program, my friends, my coworkers, my professors at Georgia State University, the departmental staff at the Georgia State University's J. Mack College of Business, and all who encouraged my decision to pursue this research study program at Georgia State University.

ACKNOWLEDGEMENTS

I want to thank Dr. Yusen Xia, who is chair of the committee, and the honorable members of the committee, Dr. Baozhong Yang and Dr. Peter Zhang, for their valuable guidance and support. Dr. Xia was patient and provided valuable advice throughout the course. I owe a special thanks to him, without whom this work could not have transformed from mere ideas into a research product. I also extend my thanks to the cohort, administrators, faculties, and the entire body of Georgia State University's J. Mack School of Business – the Executive Doctorate program that transformed our learning experience at Georgia State University into a memorable and collaborative journey. I would like to give a special thanks to Dr. Lars Mathiassen and Dr. Louis Grabowski for providing proper guidance throughout this enduring learning endeavor.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

Abbreviation	Description
ACA	Angel Capital Association
ASIC	Australian Securities and Investments Commission
BGFRS	Board of Governors of the Federal Reserve System
CV	Control Variable
DV	Dependent Variable
FAQ	Frequently Asked Questions
FINRA	Financial Industry Regulatory Authority
FRED	Federal Reserve Economic Data
FSA	Financial Services Authority (United Kingdom)
FTC	Federal Trade Commission
GSU	Georgia State University
IV	Independent Variable
JOBS	Jumpstart Our Business Startups
LED	Light Emitting Diode, a device that emits light
NSBA	National Small Business Association
S.E.B.I.	Securities and Exchange Board of India
S.E.C	Security Exchange Commission, USA
SCT	Social Capital Theory
PROMOTER	Owner or Business pitching a campaign to raise money
URL	Uniform Resource Locator (web address)
FUNDER	Investor or Online crowdfunding user invests in a product
SmartPLS, SPSS	Software used for statistical analysis and data modeling
VC	Venture Capital
WSAGO	Washington State's Attorney General Office

ABSTRACT

Role of Social Capital in Crowd Funding Campaigns: Exploring Factors That Fuel Success in Crowd Funding Campaigns

by

Babu V. Manikandan

May 2020

Chair: Yusen Xia

Major Academic Unit: Executive Doctorate in Business

Crowdfunding provides a convenient method with which to collect funding from an immense base of investors without geographic boundaries and intermediaries. In recent years, it has become entrenched as a surrogate funding source to traditional external finance for entrepreneurs. This paper offers an exploration of factors that propel crowdfunding ventures from a dataset of 182,216 projects and over $2 billion in funding from the two most common crowdfunding platforms based on rewards, namely, Kickstarter and Indiegogo. While previous studies have identified certain elements that lead to success in crowdfunding campaigns, this study delves into the pivotal success factors influencing funding success based on social capital theory. This study asserts that the strength of the promoter's social network ties increases funder commitment to a crowdfunding campaign and funder trust, both of which lead to a successful campaign. We further predict funder's perceived risk to be a critical factor in a campaign's success. We explore prior studies in the literature with a common framework into various financing options and evaluate the crowdfunding paradox from funders, promoters, and online platform dimensions. This study also examines the potential significance of social capital, promoter commitment, and funder risk to crowdfunding campaign success, representing an

addition to the literature. This empirical investigation is a quantitative study of crowdfunding campaign characteristics associated with influencing funders to make decisions to invest that uses the social capital theory as a conceptual framework. This model adds practical findings concerning crowdfunding campaigns. It also presents a reliable model for businesses to determine further how to tap into potential elements that can augment the success of crowdfunding campaigns in raising funds.

INDEX WORDS: Crowdfunding, equity crowdfunding, non-equity crowdfunding, FINTECH, Indiegogo, Kickstarter, social capital theory, alternative finance

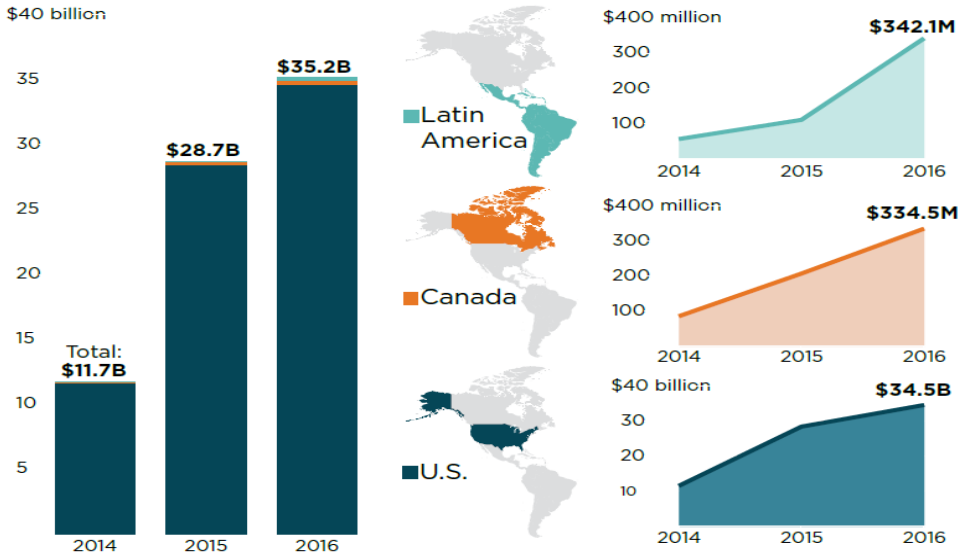
I INTRODUCTION

I.1 Entrepreneurial Finance

A critical barrier to the success of any entrepreneurial business is access to capital. Especially for startups, initial capital is difficult to source. Traditionally, to structure or bolster a new venture, regardless of whether the working capital comes internally or through external sources such as through debt financing, for entrepreneurs, obtaining the necessary finances is crucial (Cosh, Hughes, et al. 2009). Crowdfunding has gained rapid popularity (Allison, Davis, et al. 2015) and is now increasingly an alternative way (Belleflamme, Lambert et al. 2014) for entrepreneurs to raise funds. The financial endowments from the broader mass span from small grants or funding for a future reward to more formal, time-consuming, and complex debt restructuring and security investments (Mollick 2014, Lehner, 2014). Technological advancements have created new opportunities and financing methods with which entrepreneurs can raise seed capital (Bruton, Khavul et al. 2015).

Traditionally capital is raised through bank loans, venture capital, friends and family, or angel investing. Crowdfunding, however, is increasingly widely recognized as an alternative mechanism to raise capital, specifically in the startup stages, when possibility of failure counterbalances the probable earnings for institutional investors (Lehner 2014). Crowdfunding is a new pathway through which start-ups can augment monetary resources to launch ingenious products (Belleflamme, Lambert, et al. 2014). Crowdfunding has unfolded lately into a global, alternative funding model with a high probability of lowering the cost of capital for early-stage businesspeople (Ziegler, Reedy, et al. 2017). From 2014, crowdfunding as a new channel for raising finances began to grow exponentially across the American continent, expanding to $28 billion in 2015 and $35 billion in 2016 (Figure 1), a staggering growth of 23%. Between 2014

and 2016, the transaction volume of non-traditional finance transactions surpassed $75 billion (Ziegler, Reedy, et al. 2017), and based on a research work by the World Bank (Report 2013), by 2025, this alternate form of soliciting funds from the masses is expected to reach more than $100 billion globally.



**Source: 2017 Alternative Finance Industry Report (Ziegler, Reedy et al. 2017)

Figure 1 – Americas Alternative Finance

I.2 Crowdfunding Types

The two significant divisions in the crowdfunding sphere are equity and rewards methods. In the first, equity crowdfunding, entrepreneurs can solicit funds from the masses in exchange for equitable securities as a future profit (Vismara 2016). In the second, non-equity crowdfunding, the start-ups can solicit individuals to provide money generally through an online platform for a promise to purchase their products at a discounted price (Davis, Hmieleski, et al. 2017). An online platform that promotes crowdfunding is vital to connect the funders (the general public who provides the financial capital or demand) and the promoters (the

entrepreneurs and innovators who need that capital or supply; Agrawal, Catalini, et al. 2014). Table 1, below, details popular crowdfunding methods.

Table 1 – Popular crowdfunding methods

Crowdfunding Model	Business Model	Features	Example of online platforms
Equity-based	Rewards	In return for equity or profit-sharing, funders invest in startup companies and small businesses	1. SeedInvest 2. GofundMe 3. BuyTheBlock 4. CollectiveSun 5. CrowdIgnition.com
	Lending	Start-ups raise funds as loans to pay back to the funders over time at a predetermined interest rate	1. LendingClub 2. Prosper 3. FundingCircle.com 4. UpStart 5. KickFurther
Non-Equity based	Donations	Funders donate money to help charitable causes.	1. Causes 2. Chuffed 3. Fundly 4. Bonfire 5. Donately Corp
	Rewards	Businesses collect funds to launch innovative products or services. Funders receive either appreciation as a reward or the pre-acquisition of product or service at discounted rates.	1. Kickstarter 2. Indiegogo 3. Patreon 4. CircleUp 5. Rockethub

The JOBS Act formalized the crowdfunding method based on equity exchanges beginning early 2012 in the United States. Many stipulations of dealing with securities eased, making it easier for small businesses to access funds and raise them from the masses in exchange for future profits. For example, a group of investors can remain private with minimal Securities and Exchange Commission (SEC) reporting stipulations. Thus, unlike publicly traded companies, in which accounting, governance, and other rigid requirements are present, crowdfunding is subject to a high risk for investors in the equity space (Agrawal, Catalini, et al.

2014). At around the same time, in 2012, Pebble, the company behind the first smartwatch on the market, began attracting investors with crowdfunding opportunities via the online crowdfunding platform Kickstarter. Pebble successfully raised close to $10 million from 69,000 pledgers through the Kickstarter campaign. Eventually, due to supply chain issues, the shipments of watches that Pebble promised during the holiday season in 2012 to its funders only shipped in early 2013. This first unfortunate setback upset funders, who had often planned gifts during the holiday season. The same supply chain issue resurfaced mid-2015, which transformed Pebble from a smartwatch industry pioneer and then successful start-up to a financial mess. Eventually, Pebble was acquired by FitBit for a mere $25 million, and the Pebble series was discontinued by mid-2018. Similar to Pebble, another start-up entrepreneur, Ryan Grepper, raised over $13 million from 62,642 funders through the Kickstarter crowdfunding platform with the promise of delivering a product named Coolest Cooler. The product was a high-tech cooler envisioned with a variety of innovative technology features. Initially starting with a low price tag of $125, the price increased to $225 due to the cost of manufacturing, and only about 20,000 funders received their promised products. Subsequently, the product went on sale on Amazon with a price tag of $499 to cover the manufacturing costs, which raised some concerns from remaining funders who did not get their initially promised products. Both Pebble and Coolest Cooler are examples of fundraising success that failed to deliver due to issues in product design, poorly planned supply chains, and production issues. Both products were unable to live up to expectations, emphasizing for investors that funders are not merely investors, but are also the customers who intended to use it. Pebble’s and Coolest Cooler's fundraising success on crowdfunding platforms set the precedent for the growth in popularity of non-equity crowdfunding and provided a sound financial alternative for entrepreneurs to raise funds.

In early 2015, Ethan Mollick, a professor from Pennsylvania, undertook a study for Kickstarter to determine the number of failed campaigns due to a lack of delivery of goods promised to its funders. Mollick's study included a survey that encompassed more than 47,000 funders from the Kickstarter portal and scrutinized the significant factors affecting the success of campaigns and promoters' ability to follow through with their promised rewards (Mollick 2015). The study concluded that there does not seem to be a fundamental issue correlated with failure, as only close to 9% of failed efforts related to the delivery of promised products, and promoters should plan to work with funders and communicate how their money spent. Kickstarter and Indiegogo are two non-equity based platforms that are popular among promoters. Promoters on the Kickstarter online portal have raised more than $3.8 billion on the platform from 15.2 million funders since its inception in 2009 (Kickstarter 2018). Promoters on the Indiegogo online platform, meanwhile, have raised more than $1 billion from more than 11 million funders since was launched in 2007 (Indiegogo 2018).

After the JOBS Act in the United States, many countries followed suit by enacting laws across the globe and implemented crowdfunding regulations in an attempt to protect the investors and promote crowdfunding based on securities (Jegelevičiūtė and Valančienė 2015). In the wake of this act, crowdfunding based on equity swaps has blossomed as a contemporary source of trivial equity choice of fundraising for early-stage businesses (Cumming and Vismara 2016). Before the signing of the JOBS Act, the Security Act of 1993 mandated that all offers and sale of securities be reported to the SEC except in the case of an explicit exemption. Though the JOBS Act allows the registration for some crowdfunding transactions, widely expected to promulgate the dynamics of the equity market then. Subsequent amendments and the addition of regulations to the JOBS Act released by the SEC for equity crowdfunding aimed to protect

funders, regulate the equity markets, and simplify capital accumulation from the masses. In the United States, the SEC formulates regulations and reporting requirements for equity-based crowdfunding and FINRA doctrines standards for the funding portals that play as intermediaries between funder and promoter. The SEC crowdfunding rules facilitate eligible firms to promote and transact securities through crowdfunding and stipulate that all activities take place online through a mediator registered with the commission. The rules of the SEC allow a firm to campaign only up to $1,070,000 in any given 12-month period, and they limit the amount of money that a funder can invest and mandate the disclosure of information by filing with the SEC.

Moreover, all securities-related crowdfunding transactions are governed by the federal securities laws and provide limited protection to the funders by making promoters accountable for the statements made regarding the company and the equities offered. Unlike non-equity crowdfunding transactions, for equity crowdfunding transactions, the SEC enforces stricter laws through criminal, civil, and administrative proceedings. If, for some reason, all conditions promised for the offering not met, then funders may be eligible for a refund of their purchases by returning the securities purchased. The new rules enacted for regulation funding provided new opportunities for promoters to target new funders in equity space and spur more equity offerings. Promoters under regulation crowdfunding for 138 startups have raised $47,321,624 from the funders portal (Wefunder 2018).

I.3 Purpose of the Study

The focus of previously published research work has mainly been the elements that influence the campaign's success on equity and non-equity crowdfunding web portals. However, a comprehensive examination of the components that propel a crowdfunding campaign to success remains absent. Entrepreneurs search for knowledge with which they can have a higher rate of success in accumulating the funds, mainly through their social networks (Leyden, Link et al. 2014). This study focuses on offering a framework to collect and analyze supporting literature for a better understanding of crowdfunding characteristics from three dimensions (promoter, funder, and funding portal). In addition, our study aims to add to the evolving stream of prior studies based on SCT, to build upon existing literature, and to present the portrayal of the promoter's social capital in crowdfunding campaigns.

I.4 Research Perspective and Approach

Perceived as an alternate method by which individuals can use websites to promote a creative idea or product and solicit financial contributions, crowdfunding is gaining broader popularity. A variety of websites are available to host crowdfunding initiatives. This paper focuses on the two widely recognized web portals, Kickstarter and IndieGoGo, collecting and analyzing secondary data sets that allow the analysis of compelling factors that have a statistical significance in predicting the prospective crowdfunding campaign's success. The longitudinal nature of the data we collected enables us to study the role of factors and the probability that they impact whether the campaign reaches its goal. The preliminary analysis of data published on the crowdfunding portals suggests a higher rate of projects not being funded successfully. While all data on equity-based crowdfunding campaigns from the SEC relates to firms, many data on campaigns on the two crowdfunding platforms is not. The analysis is based on a pervasive and

contemporary database utilizing the pre-scrapped data of more than 100,000 campaigns that have been successful or failed on the non-equity reward-based platforms Kickstarter and Indiegogo.

This study builds upon the need for perspective promoters to predict success before launching their campaign, and this study primarily aims to enlighten campaign managers with project planning. Given the context of an inadequate literature base focusing on empirical analysis and increased prominence of tapping social networks in terms of generating economic value, we attempted to address this gap in this study. Social capital is a term widely debated in the literature, with interpreting it in terms of the trust, and others interpreting it as tapping social networks for monitory benefits. We take the latter approach, as today's technologically advanced world has seen an increase in the strength of social networks, and communication and conversations online make a significant contribution to promoters soliciting investments from funders.

I.5 Summary

The organization of the rest of the study is summarized below.

Chapter 2: Literature Review

This section provides a far-reaching review of evidence organized in terms of the principal shafts (promoters, funders, and platforms) of crowdfunding campaigns. To provide a meticulous glance at the characteristics of crowdfunding campaign, our search of articles from within GSU library initially yielded 2,423 articles. We only considered scientific articles, pertaining to the main shafts of crowdfunding campaigns (providers, funders, and platforms) and that focused on social capital theory (SCT). Using these criteria, we further narrowed down our analysis to 675 articles that matched the research questions of our study. We arrived at the final list of articles that is

included in the reference section of this study by further filtering them by manually reading the articles and identifying those that validated our research needs.

Chapter 3: Research Composition and Methodology

In this section, the structure of our design of the study and its methodology is explained in detail to support the quantitative approach chosen to answer primary research questions from our perspective. Each of the five hypotheses is tested and outlined in this section of the study. This section covers details on the collection of the secondary data, the method in which the data was cleaned and transformed, and the research model. In this section, we further examine the non-equity based online crowdfunding platforms, describe the procedure followed, and define the measures by which we determine the factors that most impact the crowdfunding campaign.

Chapter 4: Results

In this section, we present the outcome of this research study. We begin with the sample selected and provide an interpretation of the statistics from it. The software used to complete the regression, the various variables used in our mathematical regression analysis, and the variables used to interpret the statistics to validate our research model.

Chapter 5: Discussion, Practical implications, Contributions, and Future Research

In this chapter, in addition to discussing findings from our study, we lay out the implications of our study and suggesting relevant future research based on our perspective.

Chapter 6: Conclusion

In this chapter, we furnish the conclusions derived based on analysis and results for this research.

II LITERATURE REVIEW

II.1 Entrepreneurial Finance and Options

Growing companies need finance, which represents a necessary ingredient at various stages of their growth (Florin, Lubatkin et al. 2003). The early-stage finance needs of an entrepreneur are a combination of debt and equity financing (Wille, Hoffer, et al. 2017). Most entrepreneurs initially try to meet their funding needs locally in geographic terms to build and enhance reputation and trust. Family and friends tend to be the greatest contributors to the initial requirements of an entrepreneur. Other institutional investors, including venture capitalists (VC), personal lending firms such as banks, and wealthy individuals such as business angels, lend initial seed capital for early-stage ventures. Bankers emphasize or evaluate proposals seeking credit based on creditworthiness and the reputation of the entrepreneur, pledgeable assets as collaterals, and data available to assess the track record of the firm (Berger and Udell 1998). Venture capitalists back many innovative products but often seek quicker returns on their investments due to the significant risks associated with startups and the longer development cycle necessary to realize capital gains (Brown and Floros 2012). External capital is equally vital for both the entrepreneurs and the funding institutions (Cosh, Hughes, et al. 2009). Entrepreneurs are more likely to use internal financing options first before seeking external opportunities (Cassar 2004). Between 2007 and 2012, small businesses in the United States were hit harder by the financial crisis as banks focused more on profitable segments, making loans increasingly difficult to obtain (Mills and McCarthy 2014).

II.1.1 *Banking and Formal Lending Institutions*

Prior research has indicated that lending by banks is a significant source of seed capital for small businesses (Cosh, Hughes, et al. 2009). Due to the consequences of the global financial predicament in 2008, lending has been significantly reduced, as financial firms are hesitant to extend loans to small business owners due to new regulations and a shortage of money (Paulet and Relano 2017, Wille, Hoffer, et al. 2017). Though these formal capital lending institutions offer fledgling funds to support emerging small businesses and their growth needs, these obligations are often coupled with higher interest rates (Florin, Lubatkin, et al. 2003). Firms need access to external financing, without which they lack the cash reserves necessary to fund research and development and realize innovation (Brown and Floros 2012). For new firms, external credit is an essential source of capital, and bank credit is one top source (Robb and Robinson 2014). The small business credit survey (SBCS) conducted annually by the consortium of the Federal Reserve Banks in the United States provides insight into small business financing needs. A recent study in 2019 confirms that large formal lending institutions such as banks remain one of the predominant comprehensive providers of funds for small businesses (SBCS, 2019). A key finding from this survey highlights that entrepreneurs have higher success rates with online lenders compared to bank loans. The respondents of the study emphasized the importance of loans offered by banking institutions as one of the dominant genesis of financing for early-stage businesses in helping them start and develop their business, seek new opportunities, acquire more resources, meet operating expenses, and restructure existing debts. The tables below provide a summary of the sources of external finance, of the significant reasons that credit is declined by banks, and of the challenges faced by firms with respect to banks. While the reasons for the challenges faced by startup firms seeking capital may vary for the dissatisfaction with banks and formal financing institutions, the survey respondents identify the

primary reasons as long wait times for credit decisions, the complicated application process, higher interest rates, and the lack of transparency in the lending process.

Table 2 – Most prevalent types of external finances

Financial Sources	2018 %
Bank Loans	55
Credit	52
Trade Loans	13
Lease	9
Equities	7
Cash Advances	6
Factor Loans	3
Other Forms of Credit	3
Did Not Use Institutional Lending	20

Note: n = 6,513; Source: BGFRS, 2019

Table 3 – Most frequent reasons for credit denials by financial institutions

Reasons for Denials	2018 %
Not High enough Credit Score	36
Insufficient Credit History	35
Too Much Debt Already	35
Insufficient Collateral	33
Weak Business Performance	23
Other	5

Note: n = 635; Source: BGFRS, 2019

Table 4 – Most typical reasons for dissatisfaction with financial institutions

Reasons for Dissatisfaction	2018 %
Funding Decision is Time-Consuming	26
Complicated to Apply	23
Higher Cost of Capital Due to Financing Terms	19
Inadequate Clarity	15
Antagonistic Terms	12
Other Reasons	15

Note: n = 985; Source: BGFRS, 2019

II.1.2 *Investments from Institutional Investors*

Venture capital remains one of the prominent approaches used by experienced entrepreneurs seeking investments to raise money (Kaplan and Strömberg. 2004, Nielsen, Wachowicz, et al. 2017). Startups rely on stock issuance to raise capital, and early-stage venture

capital investment options vary, including revenue-based finance, dividends, venture debt, convertible debt, agreement on future equity, and prepayments (Bernthal and Young 2018). Institutional investors share their management expertise and provide financial resources to the firms they fund (Baum and Silverman 2004). Institutional investors normally engage in the invested companies through rigorous monitoring and evaluate the ventures for returns until they exit through the liquidation of investments or acquisitions (Nahata 2008). The evaluation criteria that VCs use to select projects, such as rate of return, risk, and the startup team's reputation, is tedious (Franke, Gruber, et al. 2008, Barnhart and Dwyer 2012). Market attractiveness, area of expertise, strategy, deal terms, equity stake, quality of management team, and competition are factors that lead VCs to invest in a firm (Baum and Silverman 2004, Matusik, George et al. 2008, Korteweg and Sorensen 2010). Venture capitalists generally invest in local markets due to regulations and geographical proximity relevance (Bringmann, Vanoutrive et al. 2018, Colombo, D'Adda, et al. 2019). Though the SEC regulates venture capital investments as they do other forms of private equity investments, the Small Business Administration issues rules that provide grants to propel investments into startups (Koppel 1999, Tibbets 2012). Regulations for venture capital investments are more specific in foreign countries, Indonesia, for example, to regulate the market and encourage foreign investment (Abubakar and Handayani 2019). The lack of access to capital due to increasingly stringent rules and regulations of financial institutions has led VCs to search rigorously for opportunities to achieve higher growth, and geographical determinants have propelled the demand for options in sources of financing (Bringmann, Vanoutrive et al. 2018, Kim and Hann 2019). Table 5 below summarizes the characteristics in terms of investor traits, investment decisions, reward, geography, and regulations from the perspective of the literature.

We use employ the same framework to other bumf of financial options such as angel investing, equity-based, and non-equity-based crowdfunding methods.

Table 5 – Venture Capital Investment Features

Features	Venture Capital Investors	Literature
Common investor traits	Banking professionals with expertise in Finance	Kaplan and Strömberg. 2004, Baum and Silverman 2004, Nielsen, Wachowicz et al. 2017
Platform and investment decisions	Social networks and investment decisions are vigorous and based on deep-level analysis of financials	Kaplan, Sensoy et al. 2009, Gompers, Gornall, et al. 2020
Reward	Equities, Charges	Franke, Gruber, et al. 2008, Barnhart and Dwyer 2012 Florida and Mellander 2017
Funder Geography	Mostly national, other geographic investments made through a local partner	Bringmann, Vanoutrive et al. 2018, Colombo, D'Adda et al. 2019
Return on Investment	Financial returns are essential	Matusik, George et al. 2008, Korteweg and Sorensen 2010
Regulations	Regulations that propel investments in startups	Koppel 1999, Tibbets 2012, Abubakar and Handayani 2019

II.1.3 *Investments from Wealthy Individuals*

Another leading form of financing to which start-up firms turn is angel investors, that is, an individual or association of wealthy individuals who provide the initial investments needed by entrepreneurs at early stages in swapping for a stake in the company (Masona and Harrisonb 2002, Sohl 2003, Goldfarb, Hoberg, et al. 2008, Romaní, Atienza, et al. 2018). Compared to venture capital investments, angel investors get involved earlier stages, invest smaller amounts, take higher risks, and have less time to decide comparatively among investments, and they are increasingly garnering the attention of policymakers to bring innovative products to consumers worldwide (Liu 2015). Angel investors have formed groups and use more technology platforms to communicate about better opportunities, share experiences, and seek avenues of new investment (Kerr, Lerner, et al. 2014). Unlike bank loans, where the risk of insolvency and delinquency is with the borrower, with angel investments, the risk of failure is with the investor (Sohn 2016). Angel investors invest their capital generally in their areas of expertise and continue to provide strategy, advise, guidance, and control over the investment to realize the gains either through the acquisition or sale of the company for profit (Kerr, Lerner, et al. 2014). The American Angel Capital Association (ACA), which has currently listed more than 250 active angel groups and more than 140,000 individual angel investors in its latest report (Timmins, Flaim, et al. 2019), mentions that successful exits take time and that many companies go out of business. The investment decisions by the angel investors are time-consuming, as it takes numerous rounds of rigorous negotiations with many points at which the entrepreneur fails to obtain investment and is also less likely to attract other forms of investment options (Sudek, Mitteness, et al. 2008, Shane 2009). Table 6 summarizes the characteristics of angel investing.

Table 6 – Angel Investing Features

Features	Business Angels	Literature
Common investor traits	Former entrepreneurs	(Masona and Harrisonb 2002, Sohl 2003, Goldfarb, Hoberg et al. 2008, Romaní, Atienza et al. 2018)
Platform and investment decisions	Angel networks and investment decisions based on investor experience on similar deals	(Sudek, Mitteness et al. 2008, Shane 2009, Kerr, Lerner, et al. 2014)
Reward	Equity percentage of shares	(Goldfarb, Hoberg et al. 2008, Drover, Wood, et al. 2017)
Funder Geography	National and limited to the country of investor	(Goldfarb, Hoberg et al. 2008)
Return on Investment	Financial returns are important	(Kerr, Lerner et al. 2014, McDonald and DeGennaro 2016, Timmins, Flaim, et al. 2019)
Regulations	Regulations that control the equity investments apply	(Sohl 2003, Kerr, Lerner, et al. 2014, Liu 2015)

II.1.4 *Emergence of New Alternate Finance Option*

Although both debt and equity finances are essential to growing a firm, entrepreneurs are skeptical about tapping into them due to fear of losing their independence (Berger and Udell 1998). Over the years, the financing for firms has evolved from preferred stocks to crowdfunding for entrepreneurs looking for investments, whether into startup firms or established ones, to restructure their debt (Bernthal and Young 2018). Crowdfunding is a widely accepted funding phenomenon with a distinctive pedigree for early-stage firms of funding and financing compared to conventional forms of investment, especially when banks, angel investors, and venture capital funds, which have complicated due diligence processes, in extending seed capital (Lehner 2014). Compared to traditional forms of funding approaches such as institutional investment firms or wealthy individuals, with crowdfunding, corporate governance

power is transferred to the entrepreneurs seeking capital (Kerr, Lerner, et al. 2014). Crowdfunding complements the traditional methods of financing and can serve as a stepping stone to access to other forms of financing (Davis, Hmieleski, et al. 2017). The advancements in technology made funders to communicate with each other before making investment decisions in crowdfunding platforms has minimized the geographic impact of the presence of promoters (Vismara 2016). In addition, not only do crowdfunding platforms and social networks eliminate the costs generally involved in traditional forms of financing, but they also make access to capital relatively easier for those with limited access to other types of funding (Mollick and Robb 2016). Crowdfunding has grown in popularity and evolved as a lucrative funding model and option with a higher probability of funding for early-stage entrepreneurs (Burtch, Ghose et al. 2015, Ziegler, Reedy et al. 2017). Social networks help prospective funders derive valuable information from past funders, which potentially plays a key role in investment decisions (Estrin, Gozman, et al. 2018). Compared to venture capital, crowdfunding can help startups actuate the demand and respond better (Liu and Wang 2018). Unlike traditional forms of financing, crowdfunding eliminates the selection and funding decision biases that are commonly prevalent in geographically constrained conventional financing options (Walthoff-Borm, Vanacker et al. 2018, Kim and Hann 2019).

II.2 Crowdfunding Types

Entrepreneurship is one of the main phenomena behind economic ontogenesis and the fabricating of jobs in any economy. A recent study released by the NSBA indicates that raising funds remains one of the dominant challenges for startups to survive, operate, and expand (NSBA 2017). For example, according to the study, in the United States, startup firms created employment opportunities for more than 58 million people, close to 47% of the workforce in the

private sector, and created close to 2 million total new work opportunities in 2015. However, only one in three start-ups survived more than five years (USBA, 2018). The number of commercial banks is on the decline as well, from more than 7,800 in 2002 to little more than 4,700 in 2018, which makes it more difficult for entrepreneurs to look to bank finance as an option (FRED 2019). With the other finance options such as venture capital and angel investing, the selection biases, geography, and vetting process makes it more arduous for start-ups in raising funds and crowdfunding as an alternate source is on the rise (Vanacker and Manigart 2010, Cumming and Vismara 2016, Block, Colombo, et al. 2017). Crowdfunding, a new financial option in which small contributions solicited from a larger crowd in exchange for a reward, products, services, donations, or charity causes (non-equity), or financial securities or equity in the firm (equity-based) is gaining momentum (Davis, Hmieleski, et al. 2017, Guan, Deng, et al. 2020).

II.2.1 *Funds from the Mass for Equity Swap*

Equity-based crowdfunding is a new form of institutional investment financing in which funders invest in exchange for an agreed-upon set of equity or shares (Ahlers, Cumming, et al. 2015). Equity crowdfunding investments, which are estimated to reach more than $90 billion by 2020, are also referred to as crowd investing or crowdfunding based on investments (Hornuf and Schwienbacher 2018, Prakash and Reddy 2019). The geographic location, regulations, size of new ventures, and growth prospects of a firm are some influential factors that affect an equity-based funding campaign and its success rate (Guenther, Johan et al. 2017). For promoters to have a successful equity-based campaign and for funders to have a return on investment, communication between the two is necessary to educate and share knowledge (Hornuf and Schmitt 2016, Vismara 2018). As the JOBS Act spurred the crowdfunding based on equity swaps

to emerge as a viable choice for raising the needed funds from prospective funders, the SEC enacted further regulations and amendments to the JOBS Act that increased the opportunities for entrepreneurial start-up firms to raise capital (Won 2018, Mamonov and Malaga 2019, Mamonov and Malaga 2020). Regulations of the SEC mandate that promoters make equity offerings through online portals, also known as intermediaries, which serve as gatekeepers, rather than through financial advisors (Won 2018). Equity crowdfunding is increasingly becoming a global phenomenon, with regulatory bodies in various countries turning their attention to making laws and regulations that minimize the risk and helping startups raise equity-based crowdfunding. For example, regulatory agencies worldwide are caught up in protecting investors. Regulatory and governing authorities such as the ASIC in Australia, the SEBI in India, the FSA in the UK, and many more worldwide have approved and legalized equity-based crowdfunding as a viable choice of financing for small business firms (Jegelevičiūtė and Valančienė 2015, Joshi 2018, Prakash and Reddy 2019). Firms can now use equity-crowdfunding to obtain contributions from a massive crowd rather than a few wealthy investors, and unlike stock market investing, equity-crowdfunding is regulated, and funders should be more aware of implications such as risks and taxes (Camp and Kuselias 2018). With any new financial method, including equity crowdfunding, financial frauds that lead to financial losses for investors are a concern to regulators due to a lack of funders' financial knowledge on investments and regulations, and countries across the world have enacted laws to protect investors (James 2013, Dong, Liao, et al. 2018, Cumming, Hornuf, et al. 2020). The subsistence of institutional presence or non-existence, transparent equity-based crowdfunding related restrictions and enforcement are needed to avoid uncertainty and improve the flow of investments (Kshetri 2018). Table 7 summarizes the equity-based crowdfunding characteristics.

Table 7 – Equity-Based Crowdfunding Features

Features	Equity-Based Crowdfunding	Literature
Common investor traits	Most of them have no investment experience	James 2013, Dong, Liao et al. 2018, Cumming, Hornuf, et al. 2020
Platform and investment decisions	Online portals and judgments are limited to the individual funder and their social networks	Vulkan, Åstebro, et al. 2016, Won 2018
Reward	Equity percentage of shares	Ahlers, Cumming et al. 2015, Vulkan, Åstebro et al. 2016
Funder Geography	No constraint as investors connected through an online portal	Hornuf and Schwienbacher 2018 Guenther, Johan et al. 2017
Return on Investment	Financial gains are moderately crucial for investors	Hornuf and Schmitt 2016, Vismara 2018
Regulations	In the U.S., the FINRA and SEC regulate investments to protect investors	Jegelevičiūtė and Valančienė 2015, Hornuf and Schwienbacher 2017, Joshi 2018, Kshetri 2018, Won 2018, Mamonov and Malaga 2019, Prakash and Reddy 2019, Mamonov and Malaga 2020

II.2.2 *Funds from the Mass for Rewards*

The other realm is funding for charitable causes or donations in return for a token of appreciation. The literature on this dimension, donation-based crowdfunding, is embryonic but growing fast. Donation-based crowdfunding supports charitable or ideological causes and is a new innovative business approach to soliciting money from the more massive crowd via online (Guan, Deng, et al. 2020). Promoters pitch for donations based on belief and identity, and funders are motivated to donate based on an identity that influences why they give (Aaker and Akutsu 2009). Furthermore, the amount of donation and the reason that funders donate is influenced by how they physiologically perceive the promoter's pitch for money (e.g., empathy,

sympathy, or guilt; Gerber, Hui et al. 2012). In addition, funders are motivated by financial benefits (e.g., tax benefits; Meer 2014, Metrejean and McKay 2018, M. 2019), pro-social reasons (e.g., returning to their community; Berns, Figueroa-Armijos, et al. 2018, Dai and Zhang 2019), philanthropic or ideological intentions (Gleasure and Feller 2016), and subscriptions to services (e.g., events, movie or magazine; Cecere, Le Guel et al. 2017). More recently. Crowdfunding platforms are currently floating a new innovative concept to promote the funder diversity base, boost funders' participation, and increase the funding amount in crowdfunding campaigns. There are two new promotional instruments that have led online portals to recently gain the attention of researchers: the lottery (Du, Wang et al. 2019) and payment of medical bills, that is, medical crowdfunding (Burtch and Chan 2019). Lotteries and auctions are not new as a fundraising option for charitable and non-profit organizations and have contributed significantly to social welfare programs (Maeda 2008). While the auction is a better mechanism than the lottery, a lottery is incentive-based and motivates and generates better participation and financial performance (Damianov and Peeters 2018, Du, Wang, et al. 2019). Online crowdfunding portals make it technologically possible to donate to medical causes. For example, based on specific diseases, age, location, and the background of patients, crowdfunding can directly pay medical bills, as evidenced by a campaign that collected more than $2 million for a child with a rare neurological disease via one popular donation-based crowdfunding platform, GoFundMe (Young and Scheinberg 2017). Medical donations are subject to privacy (e.g., being open with illness, medical-related personal details), and fraud (e.g., medical illness misrepresented) remain an area for further research. With the upsurge of medical expenses in the United States and the huge gap in medical insurance coverage, though this realm of crowdfunding method based on donations is

not a replacement option for medical insurances, it is increasingly gaining popularity as an viable option to raise funds (Gonzales, Kwon et al. 2016).

The entrepreneur's choice among several types of crowdfunding options available is vital, and among the significant kinds of crowdfunding listed in Table 1, reward-based crowdfunding is more widely used form for funding raising initiatives (Choy, Hasan, et al. 2016). Funders in this realm, for the promise of a product, service, or other form of benefit, respond to funding needs listed in online platforms by promoters in need of funding (Belleflamme, Lambert, et al. 2014). Compared to crowdfunding for equity, in which funders invest in new initiatives or startups at early-stages, funders in the funding-for-reward realm often help unproven, unfinished products or ideas become reality (Belleflamme, Omrani, et al. 2015). Funders are motivated to fund by the reward or the features and options of the product, such as video clips about the promises made by the promoters provided in the online platforms (Du and Wang 2017). Non-equity based crowdfunding supports funders with reward-based incentives to invest in promoter's pitches that center on an unfinished, new, or as yet unproven product (Davis, Hmieleski, et al. 2017). Online platforms serve as a mediator between funders and promoters on which promoters can creatively raise money by advertising their products (Cecere, Le Guel et al. 2017, Crosetto and Regner 2018). Table 8 summarizes the characteristics of crowdfunding in return for rewards, service, or other benefits.

Table 8 – Non-Equity-Based Crowdfunding Features

Features	Non-Equity Crowdfunding	Literature
Common investor traits	Most have no investment experience	Belleflamme, Lambert et al. 2013, Davis, Hmieleski, et al. 2017, Guan, Deng, et al. 2020
Platform and investment decisions	Online portals and limited to knowledge of individual funder and their social networks	Belleflamme, Omrani et al. 2015, Crosetto and Regner 2018, Medina-Molina, Rey-Moreno, et al. 2019
Reward	Products and or other non-financial benefits	Burtch, Ghose et al. 2013, Mollick 2014, Mollick 2015, Cecere, Le Guel et al. 2017, Bento, Gianfrate et al. 2018, Zhang and Chen, 2019, Guan, Deng et al. 2020
Funder Geography	No constraint as investors connected through an online portal	Agrawal, Catalini et al. 2011, Agrawal, Catalini, et al. 2015, Lin and Viswanathan 2016
Return on Investment	Product value for the money backed as perceived by investors drive future investment decisions	Steinberg 2012, Greenberg, Pardo et al. 2013, Lagazio and Querci 2018, Sauermann, Franzoni, et al. 2019
Regulations	Geographical restrictions persist and cross border transactions are regulated	Griffin 2013, Weinstein 2013

II.3 Crowdfunding Characteristics

The characteristics of crowdfunding campaigns that stimulate the contributions from funders and the campaign's success are correlated. In the context of institutional firms, wealthy individual or association investments, information asymmetry is part of the selection process, and in-person meetings to diffuse the capricious data are vital to gauge the quality of investment. Similarly, in the context of crowdfunding, social networks play a similar role in disseminating false information, fraud, and assessing the quality of projects promoted. It is crucial to identify the factors that encourage more contribution (Belleflamme, Lambert, et al. 2014). For example, when the right level of detail is provided for a project's fundraising goal, the reasons that the capital was raised are more evident and the campaign is more likely to succeed (Belleflamme,

Lambert, et al. 2014). Funders' intent to buy or fund primarily driven by their perception of a product, and developing trust through communication is vital for promoters in pitching their products (Maxwell and Lévesque 2014).

A precursor for promoters' funding success is to attract funders early in the campaign, as subsequent funders regard it as within capability of promoters to adhere to their promises on product deliveries in the realm of crowdfunding for rewards (Colombo, Franzoni, et al. 2015). Contributing online or seeking capital online has increased the visibility of information shared. For example, both funders' prior contributions (number of projects backed) or online reputation (prior count campaigns) in the form of the product comments of promoters and funder support increase as the project progress toward the funding goal (Vismara 2018). In addition, promoters' contributions to online communities such as Facebook, LinkedIn, and other crowdfunding communities shape the promoter's behavior and influence the confidence of funders (Agrawal, Catalini, et al. 2015). Regulating authorities and policymakers are increasingly challenged with the growing acclaim of crowdfunding for rewards, and along with it, the fraud to effectively control cross-border transactions and enforce regulations (Weinstein 2013, Dong, Liao, et al. 2018). Prior literature has focused on the elements such as geography that impact funders' contributions, promoters' behavior patterns, promoter networks, and innovative pitches, all of which affect funding success on non-equity platforms (Lin, Prabhala et al. 2013, Agrawal, Catalini et al. 2015, Belleflamme, Omrani et al. 2015). **Table** and **Table** in the appendices summarize crowdfunding campaign characteristics.

II.4 Innovations and Crowdfunding

From an innovation perspective, funders actuate products through continuous feedback or share new ideas that are appealing to innovating entrepreneurs. The early adoption of innovation provides opportunities for funders to provide feedback and ideas that shape progress until the project is finished and launched. This rapid adoption approach offers opportunities for promoters with innovative ideas to evaluate the market, gain credibility with prospective customers, and later expand to use other traditional funding methods such as institutional funding, debt restructuring from wealthy individuals, or venture capital (Gerber, Hui, et al. 2012). The success of crowdfunding campaigns and social communications spurring creativity is positively related (Calic and Mosakowski, 2016). It is essential to attract and sustain un-represented groups that otherwise experience difficulty raising capital to stimulate innovation (Mollick and Robb 2016). Non-equity crowdfunding is a marketplace for unfinished creative products or ideas, the number of early funders, and their anticipated impact on the ensuing progress of funding initiatives (Stanko and Henard 2017). Funders are attracted to innovative technology from promoters with more extensive social networks or patents, and the probability of funding success is comparatively higher.

II.5 Crowdfunding Platforms and Technology

Empirical studies from the literature mostly focus on the perspective of the funder and promoter in the non-equity reward-based crowdfunding realm. However, research on online platforms remains in development, and topics including the role of the online platform, its ethics and operating expenses, pressures to find new revenue generation methods, application processes in vetting the promoters, and protecting funders have increasingly been gaining the attention of researchers. In the case of traditional finances, such as by institutional investment firms or angel

investments, the vetting process is time-consuming, and the pre-screening methods that evaluate the prospectus before an investment decision are expensive in terms of effort and time involved (Yung 2009). In crowdfunding for the equity swaps dimension, the evaluation, pre-screening process, and subsequent performance of the firms once the funding decisions made are interrelated (Cumming and Zambelli 2017). Online platforms are mediatory and act as social networks between the promoter and funder that allow individuals and funder communities to collaborate. From the perspective of promoters, the services offered by online platforms should attract and list innovative and appealing products. From the funder's perspective, online platforms maintain the technology to be exciting to collaborate, provide features (e.g., video clips, detailed product specifications, security, data, or privacy protection) and simplify the access to online platform features that enables better investment decisions. The services provided by online platforms during and after the entire campaign can positively impact the success of campaigns and lead prospective promoters (new entrepreneurs as customers) to list as well (Rossi and Vismara 2017). Crowdfunding platforms enable effective communication between funders and promoters that can potentially influence the intent of funders. The intensity of the quality of such social interactions fosters the trust between funders and promoters. Positive online communications affect the funders' intent to contribute and communicate further. The online platforms provide various features and methods to improve project designs to increase web traffic. Additional social interactions on social media blogs, Facebook, and Twitter generate trust with funders. Developments in technology such as Blockchain have the wherewithal to rattle the course of global finance operations and alter the texture of funding mechanisms (Fanning and Centers 2016, Cai 2018). Crowdfunding platforms are under pressure from competition to deliver quality services, reduce operating costs, engage in more stringent due

diligence processes, increase revenue, stay differentiated, and remain technologically competitive in the marketplace (Gal-Or, Gal-Or et al. 2018). In addition, promoters are concerned about the protection of intellectual assets such as patents, trade secrets, and know-how. The risks of sharing creative and innovative ideas or products in online portals include the production of similar copycat products (Wells 2013, Blanchard 2018). Growing intellectual property infringements, as evidenced by the cases of KAZbrella's patented product, which was copied by another firm, and litigation are placing immense pressure on online portals to obtain disclosure from promoters and to protect the latter by removing the campaigns of the violators (Blanchard 2018). The continuous adoption of new technology by the crowdfunding platform is imperative in detecting fraud and protecting information for business development and sustainment (Polishchuk, Kelemen, et al. 2019).

II.6 Crowdfunding Frauds and Regulations

Funders trust the entrepreneurs promoting the crowdfunding campaigns and believe that they will obtain the rewards promised. However, a growing concern for funders and lawmakers alike is fraudulent behavior among promoters, who avail funds raised for intentions other than delivering their promises. The literature on crowdfunding fraud is embryonic, and the topic is increasingly gaining attention from researchers. The role of online platforms as intermediaries that connect promoters and prospective funders has have become vital for entrepreneurs to raise funding (Mollick 2014). The increasing popularity of crowdfunding platforms, the low entry criteria, the irrelevance of geographical separation, and the materialistic nature made the online platforms a breeding ground for fraud (Benbasat 2011, Li 2013). In the United States, the SEC, to an extent, protects funders using the crowdfunding method of swapping capital for equity against scams. Likewise, the Federal Trade Commission (FTC) provides funders with limited

protection in crowdfunding for the promise of rewards (FTC's Bureau of Consumer Protection) (FTC 2019). In 2012, 810 funders in the Kickstarter platform trusted the promoter Altius Management's Ed Nash and funded more than $25,000 to get a board game as a reward. Since the promoter failed to deliver the promised reward and violated the online platform's legal terms, which mandated that promoters receiving financial pledge deliver the promised rewards, the Washington State's Attorney General's office spearheaded legal action against the promoter (WSAGO 2014). In 2015, the FTC initiated legal proceedings against a fraudulent promoter, Erik Chevalier, who raised more than $100,000 from 1,246 funders and failed to deliver the "Doom" game. The FTC ruled that the promoter would be prohibited from running any future campaigns and imposed fines (FTC 2015). Even though crowdfunding provides the promoters with a comparatively better way to raise capital, a lack of laws to protect funders from fraudulent offerings in reward-based crowdfunding results in significant losses to the funders (Pierce-Wright 2016). Deriving cues and detecting fraudulent behavior on online interactions between funders and promoters (e.g., project details, funder questions, promoter responses) on the crowdfunding platforms can be done by applying deception detection techniques to prevent deceptive promoters and fraudulent offerings (Siering, Koch et al. 2016). Deceptive promoters are also likely to lack prior fundraising experience, not have verifiable social contacts online, and provide unclear project descriptions (Cumming, Hornuf et al. 2016). Crowdfunding platforms provide many options to collaborate, and prior to choosing the offerings listed, funders with lesser expertise should learn more from experts in the investing field and ask for advice that can not only facilitate funding success, but also improve transparency (Ibrahim 2017).

II.7 Crowdfunding and Social Networks

The main driver of crowdfunding activity for both promoters and funders is how well they have engaged in vetting opportunities by taping the social networks. Trust and communication are the bedrock of synergy between people, and during social synergy, the social demeanors of people are categories of materialistic transactions (Homans 1958, Blau 1964). Social capital affects a venture's ability to accumulate financial wealth during its growth stages (Florin, Lubatkin, et al. 2003). The term "social capital" was first used in 1998 and examined social capital in various forms, such as commitments, expectations, information mediums, and social rules for exchanging information (Coleman 1998). Social capital expediates the formulation of a new intellectual base, which firms then use as an institutional ambiance pony up to its advancement. Because of their impenetrable social information and wealth, organizations tend to be the largest body constructing and distributing the accumulated knowledge base (Nahapiet and Ghosal 1998).

In the crowdfunding context, geography or distance is not a strong factor in raising required funding (Agrawal, Catalini, et al. 2011). Information imbalance or asymmetry is a prominent provocation to crowdfunding, and the debts or imbalance of exchanges between the funders and promoters depends on the strength of the promoter's connections in social platforms (Agrawal, Catalini, et al. 2013). Even though the money pledged by the funders to a crowdfunding campaign can be an indicator of campaign success, combining them with social features significantly empowers the consummation of crowdfunding campaigns (Etter, Grossglauser, et al. 2013). Economic activities such as profitability are outcomes generated grounded on the strength of the social reticulum and the social assets garnered by operating as an intercessor between the network of social associations and realization of a range of possibilities (Gedajlovic, Honig, et al. 2013). In crowdfunding campaigns, the triumph of funding leans on the promoter's social ties, the quality of the product for which funds are solicited, the promoter's geographical presence, and active

participation in social networks to promote the product (Mollick 2014). The performance of crowdfunding impacted by the strength of the promoter's social networks, the commitment, and the context of communication with funders (Zheng, Li et al. 2014). For promoters, social networks are a useful medium that serve as a launchpad to promote innovation (Leyden, Link, et al. 2014). Because a funder's intention to fund increases through positive communication with other funders, entrepreneurs needing seed capital can interact with prospective funders on social network sites. For such effective communication, the size of a promoter's social ties on online mediums is a compelling indicator of whether a campaign will reach its goal based on rewards (Zheng, Li et al. 2014). Funders draw clues by penetrating the social network of the promoters that they intend to fund (Belleflamme, Omrani et al. 2015). Funders make decisions from the clues gathered from online social media in evaluating a promoters' ability to deliver promises (Bruton, Khavul, et al. 2015). Social media enable opportunities for a higher frequency of interactions between funders and promoters, and the use of technology increases the tendency of a campaign's success (Beier and Wagner 2015). The first social networks that promoters in need of capital tap into is private social networks, comprised of families and friends, as funders in the promoter's geographical vicinity are more likely to respond quickly than funders who contribute across boundaries (Agrawal, Catalini, et al. 2015). The more social media connections the promoter has in a crowdfunding campaign, the higher the probability of fundraising (Vismara 2016). Social information about a funder online on social media platforms impacts a campaign's success (Kuppuswamy and Bayus 2017). Trust, a significant factor that contributes to fundraising campaigns, comes from positive information present about the promoter in social media platforms based on how the funders evaluate another funder's commitment to the campaign seeking funds (Ryu 2018). Garnering information from social media networks plays an influential role in the

promoter's pitch to raise funds at various phases in the fundraising cycle (Brown, Mawson, et al. 2018). Campaigns that promote community impacts and social benefits have a higher likelihood of success (Lagazio and Querci, 2018).

In the literature that examines the other side of social networks, critics have claimed that social capital is not economics-centric and that instead it is something that happens among people and something possessed by people (Arrow 2000). Labeling social concepts with the economic term "capital" is incorrect, inappropriate, and misleading (Fine 2001, Fine 2002a, Fine 2002b). The idea of social capital has shifted and been misrepresented across geographies (Durlauf 2002). The sprouting of pledges by funders is not due solely to social media platforms (Belleflamme, Lambert, et al. 2013). Harnessing top social media information on opportunities for capital demand allows crowd wisdom (experience and investing knowledge) and circles of trust to emerge in helping the flow of capital to entrepreneurs. Nongenuine social information, by contrast, can hinder decision making for funders (Wessel, Thies, et al. 2016).

II.8 Crowdfunding in the Context of Social Capital Theory

Social capital theory (SCT) can be applied in a social setting, in which a network develops and knowledge is shared about the actor's structural position where the accumulation of capital in the form of resources or economic benefits (Bhandari and Yasunobu 2009). Social capital theory suggests that knowledge sharing is influenced by individual behavior, the number of connections, conversations, and personal relationships in a social network setup (Nahapiet 1998, Chiu, Hsu, et al. 2006). The social networks between promoters and funders influence the choice of project funding and can potentially reduce the asymmetric information in the networks (Shane and Cable 2002). Entrepreneurs enhance their reputation, credibility, and trust by building relationships through social networks that generate social capital (Moran 2005). Trust, the backbone of financial

transactions, is reaped from social capital. Moreover, there is a formidable interdependence that exists with the economic metamorphosis for benefits (Grootaert and Van Bastelaer 2002, Guiso, Sapienza, et al. 2004, Johnson 2013).

Applying this concept of SCT to the backdrop of crowdfunding, in the social network, diversified promoters and funders communicate with each other through social networking sites and crowdfunding platforms, transforming social capital into economic benefits (Lehner 2014). With the proliferation of online internet communication technologies, virtual online communities, and applications, sharing opinions, and such collective social actions that generate information antecedents the social capital (Yao, Tsai et al. 2014, Chang and Hsu 2016). The social ties of a promoter pitching a fund-raising campaign in terms of the number of social contacts on online networking platforms (e.g., LinkedIn and Facebook) increases the chances of success (Aprilia and S. Wibowo 2017). From an SCT perspective, the actor aiming to maximize the benefits of social capital must maintain a structurally reliable network and act as a center point to leverage the information flow to then gather and sustain the network ties (Gleasure and Morgan 2018, Fan, Sun, et al. 2019). The asymmetrical nature of the information flow within a weaker network can give funders ambiguous information and impact the crowdfunding campaigns negatively (Bringmann, Vanoutrive, et al. 2018). Motivation and participation in crowdfunding campaigns are key influencing factors of funding success (Choy, Hasan, et al. 2016).

In crowdfunding backdrop, information asymmetry can arise due to the different behaviors of participants in social networks, mediated through innovative entrepreneurial practices and collaborative technology platforms supporting it (Ordanini, Fisk, et al. 2011, Ferreira, Fernandes, et al. 2017). Funders mainly participate in a crowdfunding campaign if they are attracted by an innovative idea and what information is available on the promoter's social networks (Liang, Wu

et al. 2018). The exchange of information in social networks and platforms between funders and promoters is unique to the crowdfunding entrepreneurial finance method (Crosetto and Regner 2018). The knowledge and value collaboratively created to produce innovations that can generate economic value depending on the innovative capacity of both promoters and funder in crowdfunding initiatives (Medina-Molina, Rey-Moreno, et al. 2019). A critical resource for an entrepreneur is the network of relationships that benefits the both members of the network, the entrepreneur and the funders (Swanson, Kim, et al. 2020).

II.9 Literature Summary

Table 9 presents a summary of evidence from the prior literature on crowdfunding. From a funder's perspective, the studies suggest that the funding intention of funders is influenced by the perception gained from communications with other funders and promoters in online platforms. From the promoter's perspective, displaying social strength and commitment on social networks motivates funders, as summarized in Table 10. The social media platforms that connect and enable collaboration and promote innovations are summarized in Table 11. To build upon the existing literature and explain the role of the promoter's social strength and the factors that propel success in crowdfunding initiatives, we aim to examine the ever-evolving non-equity-based financial phenomenon.

Table 9 – Literature Summary for funders and factors impacting funders

Category	Factors	Literature Summary
Funders	Funding Intention	Mollick 2014, Kuppuswamy and Bayus 2017
	Success Factors	Steinberg 2012, Greenberg, Pardo et al. 2013, Beckwith and Yildirim 2016, Lukkarinen, Teich et al. 2016 Wu et al. 2018, Dai and Zhang 2019
	Determinants of Success	Chang and Hsu 2016, Paulet and Relano 2017, Zhao, Chen, et al. 2017, Wang, Liu, et al. 2018
	Funders Trust	Hong and Cho 2011, Liang, Strohmaier, Zeng et al. 2019, Wehnert, Baccarella et al. 2019
	Protections and Regulations	Ibrahim 2017, Kim and Hann 2019

Table 10 – Literature Summary for promoters and factors impacting prompters

Category	Factors	Literature Summary
Promoters	Commitment and Success	Morgan and Hunt 1994, Li, Browne, et al. 2006, Jih, Lee, et al. 2007, Ting 2011, Hashim and Tan 2015, Elbeltagi and Agag 2016, Wang, Wang, et al. 2016
	Determinants of Success	Beier and Wagner 2015, Block, Colombo et al. 2017, Butticè, Colombo, et al. 2017
	Social Network Strength	Homans 1958, Bhandari and Yasunobu 2009, Etter, Grossglauser, et al. 2013, Leyden, Link, et al. 2014, Saxton and Guo 2014, Du and Jiang 2015, Chang and Hsu 2016, Kromidha and Robson 2016, Aprilia and S. Wibowo 2017, Skirnevskiy, Bendig, et al. 2017, Laurell, Sandström, et al. 2018, Dong, Liao, et al. 2018, Alves and Edvardsson 2019, Dai and Zhang 2019, Hsieh, Hsieh et al. 2019, Wei, Chang2, et al. 2019, Saxton and Guo 2020
	Frauds, Detections, and Regulations	Li 2013, Cumming, Hornuf, et al. 2016, Siering, Koch et al. 2016, Ibrahim 2017, Cumming, Hornuf, et al. 2020
	Innovation	Gerber, 201, Brem, 2019 Leone, 2018 Kogan, 2017, Mollick, 2016, Bruton, Stanko, 2017, Messeni Petruzzelli, 2019

Table 11 – Literature Summary for factors that impact the online platforms

Category	Factors	Literature Summary
Platforms	Collaboration and Technology	Kogut and Zander 1992, Ordanini, Fisk, et al. 2011, Meer 2014, Mills and McCarthy 2014, Belleflamme, Omrani, et al. 2015, Kshetri 2015, Rossi and Vismara 2017, Gal-Or, Gal-Or, et al. 2018, Ryu 2018, Wang, Liu, et al. 2018, Brem, Bilgram, et al. 2019, Medina-Molina, Rey-Moreno, et al. 2019, Polishchuk, Kelemen, et al. 2019
	Due Diligence, Pre-screening, Disclosures	Yung 2009, Fanning and Centers 2016, Block, Hornuf, et al. 2017, Block, Colombo et al. 2017, Cumming and Zambelli 2017, Cai 2018, Wang, Liu, et al. 2018
	Protection of Intellectual Property	Wells 2013, Gilsbach 2017, Blanchard 2018
	New Means of Revenue Generation	Maeda 2008, Gonzales, Kwon et al. 2016, Roma, Messeni Petruzzelli et. al. 2017, Young and Scheinberg 2017, Burtch and Chan 2019, Du, Wang et al. 2019

III RESEARCH DESIGN AND METHODOLOGY

III.1 Research Design

Kickstarter and Indiegogo are among the world's largest non-equity based crowdfunding platforms, and on them, funders receive products or services but no monetary benefits for their funding contributions (Steinberg 2012, Mollick 2015). The crowdfunding lifecycle on an online crowdfunding portal (e.g. Kickstarter or Indiegogo) begins when one joins the community with a username of choice. As with most online websites, some data on demographics and personal information is collected by these platforms. Using the online tools provided by the platform, the promoter creates a web page for the promotion, enumerating the purpose of the funding initiative and the specific commitments or rewards for funders to produce with the funds to be contributed by the crowd, along with a date by which it will end for the campaign fundraising cycle. The promoter also indicates a campaign's goal in the form of the amount of capital required to fulfill the commitments made for the proposed campaign. Platforms enable promoters to interact with their funders by placing public updates that funders and others can see. The promoter's page is viewed by prospective investors on the online platform during an active funding cycle by permeating all the information available on the campaign made available by the promoter, including the status of funding and the number of funders who contributed, if any.

Both Kickstarter and Indiegogo need a project to be fully funded for promoters to get the money from their funders. If funders perceive there to be a risk in terms of product quality or no value for the money invested, then the likelihood of investment may decrease, which has negative consequences for a crowdfunding campaign. A higher funding goal may cause the campaign to be unsuccessful and mean that the campaign will end without money. However, a campaign can continue until the deadline or the end date and can accumulate a greater contribution than the funding goal set for the campaign. We have created a successful model

based on the general model specifications established to build on prior researches, and Table 12 (Mathiassen 2017) details our research design.

Table 12 –Summary of Research Study

Component	Definition	Specification
Title	The title asserts the substance of the design of the study with an insistence on C	Social capital's role in crowdfunding campaigns: Exploring factors that propel funding success
P	The problem setting speaks to people's concerns in an ambiguous real-world situation	Crowdfunding, despite gaining wider popularity, a significant portion of campaigns tend to fail. While previous studies identified certain elements that significantly compel the success of crowdfunding initiatives, this study delves into pivotal success factors influencing funding success based on SCT
A	The area of concern bolsters the body of knowledge within the literature that relates to P	Social capital, funder's trust, and funder's perceived risk are key factors to crowdfunding campaign's success
F	The conceptual framing helps structure the collection and analysis of data from P to answer RQ; F_A draws on concepts from A, whereas F_I draws on ideas independent of A	SCT
M	The adopted method of empirical inquiry	Publicly available dataset downloaded from the two prominent crowdfunding with common data elements about crowdfunding initiatives from https://webrobots.io/kickstarter-datasets/ and https://webrobots.io/indiegogo-dataset/. Secondary data will be analyzed using the regression and Bayesian methods.
RQ	The research question relates to P and allows research into A, and it helps ensure that the research design is coherent and consistent	In crowdfunding campaigns, what significant factors affect funders' intention to fund, and what role does social capital play?
C	The contributions to P and A and possibly to F and M	Analysis of Kickstarter and Indiegogo crowdfunding data to understand success factors (C-A) Social capital's role in funding success (C-F) Applying the SCT to a new context (C-F-A)

The first impetus of crowdfunding commotion for both the promoters (seller) and funders (buyer) is how well they have engaged in vetting opportunities using the social networks. Trust garnered from communication, which forms the basis, and during social exchanges, the various behaviors of people in social setup are types of economic transaction (Homans 1958, Blau 1964). The term “social capital” originated in 1998 and has various forms, such as commitment, notions, information means, and social beliefs (Coleman 1998). In the crowdfunding context, online portals connect promoters and funders, and on them, the promoter displays his or her funding goal in dollar terms, the rewards, and details on how the fulfillment will occur. In reward-based crowdfunding, products are mostly unfinished or under development from ideas, and promoters must be innovative to attract investment from funders. Commitment impacts behavioral intentions and decision-making, and the quality of commitment significantly impacts trust (Jih, Lee et al. 2007, Elbeltagi and Agag 2016). Within the crowdfunding context, promoters exchange information with funders about their products to build trust. Funders put in additional effort when they know that the product generates social capital.

The social strength of a funder determines how well the generated social capital transforms into economic benefits. It predominantly banks on the promoter's presence in online social networking sites, the information available about the promoters, and the number of positive exchanges with promoters, and funders positively disseminate information in online discussion forums to help funder’s trust improve. Funder distrust is a deterrent to a successful crowdfunding campaign (Gerber, Hui, et al. 2012, Strohmaier, Zeng, et al. 2019). When funders have questions about the product, promoters must respond promptly with clarifications, which can be perceived by funders as commitment. In other words, the more value a funder sees for the money, the lower the perceived risk. The higher the funder’s commitment to delivering the

promises made, the better the funder's trust. This study hinges on the elements of crowdfunding based on the rewards realm, where the campaigns prominently rely on the promoter's commitment, funder trust, funder risk, the social strength of the promoter, and the promoter's fundraising goal and further explore the role of these characteristics.

III.2 Data Collection and Validation

We downloaded the publicly available dataset from the two leading crowdfunding platforms for our research purpose from the websites https://webrobots.io/kickstarter-datasets/ and https://webrobots.io/indiegogo-dataset/. A scraper robot crawls all Kickstarter (http://www.kickstarter.com/) and Indiegogo (http://www.indiegogo.com/) campaigns and has collected data in a CSV format since March 2016, and this data crawl is posted on these websites for download once per month. We collected data from the web robot's dataset. This data included the unique identification, description of the campaign, name of the promoter, category, subcategory, campaign's URL, country, campaign launch date, campaign deadline, number of campaigning days, goal amount in dollars, final funded amount, and number of funders. Information about a given promoter's social capital or social strength was gathered based on the details provided by the individual promoter or by searching on social networking sites (Facebook, Twitter, Instagram, and LinkedIn). Additional elements such as the number of promoter's other campaigns, the count of FAQs posted by a promoter, whether there are returning funders, and the number of other projects funded were scrapped using the campaign's URL information from Kickstarter and Indiegogo websites. The pledged percentage is derived by dividing total pledged by campaign goal and multiplying by 100.

Table 13 presents the structure of the data we collected for this study.

Table 13 – Structure of the Data

Attribute	Definition	Data Type
ID	Unique Project ID	Number
PROJECT_NAME	Project Description	Text
CREATOR	Name of Creator or Company	Text
CATEGORY	Industry Name	Text
SUB_CATEGORY	Industry Sub Name	Text
PROJECT_URL	Online URL access to Project	Text
COUNTRY	Country Name	Text
CREATED_AT	Date of Project Created	Date
LAUNCHED_AT	Date of Project Launched	Date
DEADLINE	Date of Project End	Date
DAYS	Length of Project in Days	Number
STATE_CHANGED_AT	Date of Project Status Changed	Date
GOAL	Dollar Amount of Promoter's Goal to raise	Number
PLEDGED	Total Amount Pledged by Funders in Dollars	Number
BACKERS_COUNT	Number of Funders	Number
PROMOTER_UPDATED	Number of times comments changed	Number
PROMOTER_CREATED	Number of other projects created by Funder	Number
PROMOTER_COMMENTS	Number of Comments provided by Promoter	Number
NEW_BACKERS	Number of primeval Funders to the Project	Number
RETURNING_BACKERS	Number of Backers returning backers	Number
SOCIAL_CAPITAL	Total number of connections in Social sites for Promoter	Number
FAQ_COUNT	Total number of questions FAQ posted by Promoter	Number
PORTAL	Flag to denote data from Kickstarter or Indiegogo site	Text

III.3 Sample Selection

The sample that we used in our analyses included a total of 161,913 projects from the Kickstarter and 20,303 projects from the IndieGoGo crowdfunding platforms (N = 182,216). A total of 5,969 (29%) projects were successful (fundraised 100% or more) on the Indiegogo platform and 88,158 (54%) projects on the Kickstarter platform. Table in the appendices provides the data summary details.

III.4 Data Sanitization Process

For our study, we created the data table structure in Google's cloud platform using a MySQL database. Using SQL*Loader utility, we loaded the data into a temporary MYSQL database table created for the project. Then a PL/SQL was developed and used to validate the data, which was then loaded into the main table used for the empirical analysis performed in this study. This PL/SQL validation utility, which rejected any incomplete data (e.g., duplicate record, incomplete required field) and loaded them to an error table from loading into the ultimate MYSQL database as shown in Table 13.

III.5 Research Model

Our conceptual model, based on SCT (Coleman 1998, Nahapiet and Ghosal 1998), is depicted in Figure 2.

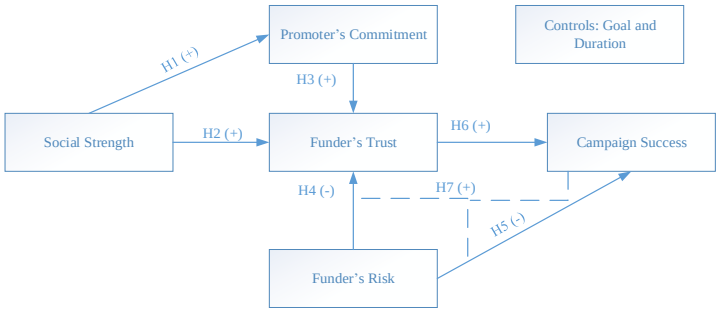


Figure 2 – Conceptual Research Model

III.6 Key Variable Definitions

We rationalized the key model variables by assigning ratings, on a scale from one to seven, for critical constructs. Table 14 provides the details of the data mapping once the data was cleaned and loaded for analysis. For the dimensions in the conceptual model to assess the reliability, we used Cronbach's Alpha and validated the constructs. The reliability and validity details for the constructs from data mapping shown in **Tabl** in the appendices.

Table 14 – Data Mapping

Construct	Key Model Variable	Type	Method
1 IF PLEDGED>=GOAL **0 IF PLEDGED<GOAL**	Project Success	Dependent Variable	Standard Regression
GOAL **DAYS**	Project Goal, Duration	Control Variables	Standard Regression
SOCIAL_CAPITAL	Social Network Strength	Independent Variable	Standard Regression
PROMOTER_UPDATES **PROMOTER_CREATED** **PROMOTER_ COMMENTS**	Promoter Commitment	Independent Variable	Standard Regression
PROMOTER_ BACKED, **RETURNING_BACKERS** **FAQ_COUNT**	Funder's Trust	Independent Variable	Standard Regression
FUNDERS_COMMENTS **NEW_BACKERS** **COLLAB_COUNT**	Funders Risk	Independent Variable	Standard Regression

III.6.1 *Campaign Success (DV)*

Campaign success, with an assigned value of 1 to denote success and 0 for the unsuccessful campaign, is our dependent variable (DV). In general, crowdfunding campaigns mainly promoted raising funds in exchange either for future profits (equity) or for a promise of delivering products (non-equity). Crowdfunding campaigns are also increasingly promoted as ways to test a product, gain responses from communities, build rapport with potential buyers, and make a marketing effort to reach potential buyers (Hassan Zadeh and Sharda 2014, Liang,

Wu et al. 2018). Since a campaign can reach its goal (successful) or not (unsuccessful), we measured the success of the campaign by assigning a number 0 or 1 based on whether the funding initiative reached or collected more than the funding goal in dollar terms. All campaigns were considered for the study regardless of whether the campaign succeeded. If the campaign was successful, the online portal transmits the funds from funder to promoter, and if not, the count represents the funder's intent to fund that money by that many funders. Similarly, the amount pledged by funders is transferred in the event of a successful campaign, and unsuccessful ones merely the amount funders volunteered to spend.

III.6.2 *Promoter Commitment (IV)*

Promoter commitment and communication are two essential factors that help gain funders' trust in a successful crowdfunding campaign. From the behavior front, the promoter's commitment, which is our independent variable (IV), affects trust (Jih, Lee, et al. 2007, Hashim and Tan 2015). Funders clarify their questions regarding the products and expect promoters to provide a responsive answer to reduce funder's risk, which represents the commitment by the promoter. We assigned the ratings based on the promoter's updates, the count of promoter comments made (involvement), and the number of responses to funder's questions that represent the funder concerns to form total scores.

III.6.3 *Funder Trust (IV)*

A lack of knowledge about a product on the part of funders leads to uncertainty, but the promoter's involvement can help reduce the funder's risk and increase the possibility of crowdfunding success. Trust, from a physiological perspective, affects human behavioral patterns (Liang, Wu et al. 2018). In the framework of crowdfunding, trust has a compelling effect on funder's intent to fund (Strohmaier, Zeng, et al. 2019, Zhang and Chen, 2019). Funders

need information on products where there is uncertainty in terms of credibility or distrust (Wehnert, Baccarella, et al. 2019). Other factors such as product innovativeness, quality, fundraiser's ability to deliver, and the promoter's reputation (prior promotions) contribute to strengthening funders' trust. We assigned ratings based on the number of other campaigns the promoter created, the count of returned funders to the campaign, and the count of FAQs posted by the promoter and averaged funder trust to form total scores.

III.6.4 *Funder's Risk (IV)*

If the funders are concerned about the product quality, then they may decide not to invest, which can harm a crowdfunding campaign. Promoters provide limited information on the project to seek investments, and funders may perceive a risk due to the possibility of negative consequences of using the product. This limit in knowledge sharing can impact funding decisions (Zhao, Chen, et al. 2017, Wang, Liu, et al. 2018). Funder cognized risk is inherently associated with the fear of losing money, losses in prior funding attempts, other losses of personal information online, and social anxiety of how funding is perceived by others (Mwencha and Muathe 2019). The information on products and businesses manipulates the funder's perceived risk and, if positive, can reduce the perceived risk of a product that does not live up to expectations, but if negative can lead to a decision not to fund (Wu, Wingate et al. 2019). The higher the funder's risk of not perceiving value in a product, the lower the probability rate of success. We assigned ratings based on the count of comments made by the funder, the number of new funders to the campaign, and the count of total interactions between promoters and funders for crowdfunding duration to average funder's risk.

III.6.5 *Social Strength (IV)*

The main factor for social strength is the promoter's experience building publicity and prosocial motivation, as well as any existing followers the promoter brings to the campaign. Social capital increases exponentially when promoters and funders are well engaged through dialogues and interactions on social media (Lehner 2014). At the time of project initiation in the crowdfunding platform with the underlying intention of the promoter, funders extend it through social interactions with promoters and other funders influenced by value perception and other funder contributions (Etter, Grossglauser, et al. 2013). The two-way communications enabled by social media technologies improves the sharing of know-how about the products or services through collaboration between entrepreneurs and prospective customers (Du and Jiang 2015). The size of a network impacts the degree to which the participants are engaged in it (Saxton and Guo 2014, Saxton and Guo 2020). We assigned ratings for the number of followers on major social networks (Facebook, LinkedIn, and Twitter), as the promoter’s social capital inflates the probability of a funding initiative being successful, we averaged social strength of a promoter to form a total score.

III.6.6 *Fundraising Goal (CV)*

Reaching or exceeding the fundraising goal in dollar terms determines whether the campaign will be a failure or a success (Greenberg, Pardo, et al. 2013). We explored the feasibility of several control variables (CVs) in this study that could provide alternative explanations for the relationships depicted in our model and that can eliminate the possible impacts of individual characteristics on the campaign’s success. These include the fundraising goal, which is included as a control variable.

III.6.7 *Crowdfunding Duration (CV)*

A campaign's life cycle or the total period in which a campaign can accept the funds from funders depends on the policies of online platforms (Mollick 2014). The Indiegogo and Kickstarter portals initially allowed 90 days and encouraged a 30-day window to generate the funds. As the duration could provide alternative explanations for the relationships depicted in our model and that can eliminate the possible impacts of individual characteristics on the campaign's success, we included crowdfunding duration as CV.

III.7 Statistical Analysis

The confirmatory factor analysis (CFA; Long 1983, Harrington 2009) and the partial least squares (PLS; Hair Jr 2014) methods were used for validity and reliability analyses of the measurement scales used for critical variables in our study. We utilized the SmartPLS 3.0 with a bootstrapping software tool and evaluated our research model. We estimated the path coefficient significance by testing the statistical significance of each path in our research model of coefficient using t-tests. We used R^2 to validate our model's predictable power. It also explained another critical indicator of the path model, with the variance of R^2 indicating the whole model fit (shown in **Table** and **Table** in the appendices).

III.8 Research Question and Hypothesis Testing

III.8.1 *Research Question*

In the realm of crowdfunding based on rewards, the entrepreneur's decision to raise capital depends on the product. Entrepreneurs consider the crowdfunding approach when the high cost of capital and marketing costs associated with bringing their products or ideas into market reality. When determining the final goal of crowdfunding, if a startup firm's final product is unfinished or is still an idea that has yet to make it to market, the goal generally includes the

subsequent marketing costs. In this scenario, the crowdfunding based on equity swap is the right choice for the promoter to consider in raising the required capital to market the product. However, entrepreneurs having a finished product will go with the reward-based approach, with the production cost determining the goal.

Furthermore, the startups, when initial capital requirements are low, prefer to market products on a pre-order basis. Choosing the right approach and regardless startup's objective to raise funds or selling finished products or having an idea or just associating with campaigns for philanthropical causes the online crowdfunding platforms have the potential to serve as marketing launchpads (Brown, Boon, et al. 2017). The pro-social motivation impacts funders' risk positively, and when funders perceive contributions positively, others are impacted in crowdfunding campaigns based on rewards (Aknin, Dunn et al. 2013, Kuppuswamy and Bayus 2017). Promoters can gain trust and funding support by appealing to funders with prosocial motives and the impact of contributions to their funding initiatives (Dai and Zhang 2019). As the funders' support is not a consistent factor throughout a campaign, promoters communicating with funders about their goals and providing timely updates on the project page helps the campaigns reach their funding goals (Kuppuswamy and Bayus 2017). We focus on promoter commitment, funder trust, funder risk, and social strength as factors that affect the crowdfunding campaign's success. We address the factors through the lens of SCT to answer our research question: "In crowdfunding campaigns, what significant factors affect funders' intention to fund, and what role does social capital play?"

III.8.2 *Hypotheses and Rationale*

H1. A positive association exists between the strength of the promoter's social network ties and the promoter's commitment.

H2. A positive correlation exists between the promoter's social network ties and funder's trust.

Rationale: Trust is a contributing factor that influences sharing knowledge (Koh and Kim 2004). The knowledge derived from social media platforms and reaped in the form of social capital can potentially be used by entrepreneurs to increase publicity and prosocial motivation by tapping the existing fan base (Steinberg 2012). In the thirst to obtain the promised rewards, funders are primarily motivated by the target goal of the campaign (Gerber and Hui 2013). Within a prosocial framework, the goal of the campaign and funder perception have a direct relationship (Cryder, Loewenstein, et al. 2013). Crowdfunding industry experts suggest that promoters must create and carry out a capable funding drive that can captivate potential funders by engaging online media to achieve their crowdfunding goals (Dushnitsky and Marom 2013). Trust derived in a social context is vital to establish the promoter's authenticity and motivate funders to contribute to a crowdfunding campaign. Hence, we predict that the promoter's social network or social strength will increase funder's trust, and funder's perceptions will positively impact the success of the campaign.

H3. Promoter commitment is positively associated with funder trust.

Rationale: Funder motivation and intent to fund proportionally impacts the goals (Förster, Liberman, et al. 2005). Goals motivate people to intensify their commitment (Ting, 2011). Knowledge-sharing is impacted by trust and commitment, as trust improves the channels of communication, and commitment keeps it alive (Chang, Hsu, et al. 2015). In the crowdfunding context, promoter commitment to a crowdfunding campaign makes the project attractive by gaining funder's trust, with higher-level communication showing commitment, and developing the liaison that will strengthen the intent of the funders.

H4. A negative correlation exists between funder risk and funder trust.

H5. Funder risk and campaign success have a negative correlation.

Rationale: Two main factors, involvement and risk, are at the focus of product purchasers, either for amusement or the prowess of product ownership (Venkatraman 1989). If the funders are concerned about the product quality, then they may decide not to invest, which can harm a crowdfunding campaign. Buyer trust and seller commitment help strengthen the buyer's intention to purchase (Shin, Chung, et al. 2013). The buyer's product involvement positively affects the risk perceived by the buyer and is positively related to the purchaser's trust expectations (Hong 2015). Within the crowdfunding context, innovative product ideas for funders provided on online funding the more the information is provided, the better it reduces the fear of funders if perceived by funders as innovative, reduce the funder's perceived risk. We base the following hypotheses on the promoter's involvement and innovation to drive funder perceived risk and its impact on the campaign's success.

H6. Funder's trust and crowdfunding campaign's success are correlated positively.

Rationale: Within the framework of crowdfunding campaigns, when funders are attracted to a product or funders perceive value for the money or when innovation attracts their interest, funders put in additional effort to learn more about the product. Consumer's perceived risk or lack of knowledge of a product leads to uncertainty, and the promoter's involvement can help reduce perceived risk and improve trust (Lin 2008, Hong and Cho 2011). If funders believe in the promoter's ability to solve problems, their ethics, their willingness to get involved with funder's concerns, and whether they will abide by their commitments, funder trust improves (Zhao, Chen, et al. 2017). From a supply chain perspective, the quality of orders fulfilled and the timely delivery of orders has a compelling effect on the motivation of returning customers to purchase (Cho 2015). In the

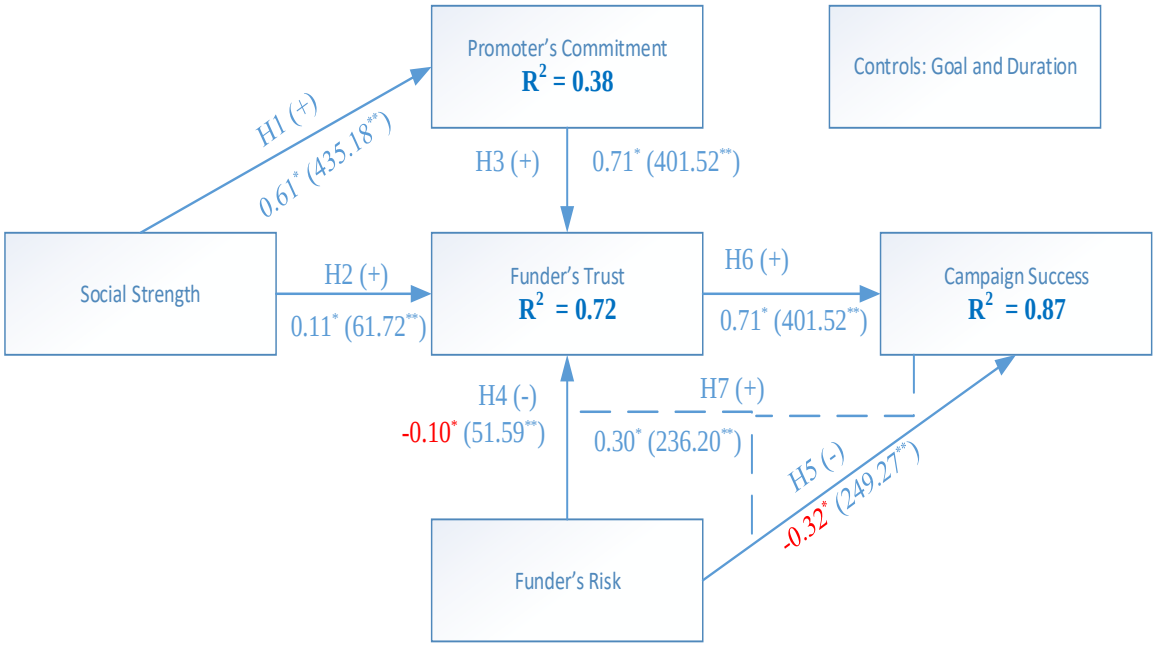
crowdfunding context, funder trust and promoter commitment to delivering the promised products both correlate with the investment intention of funders and impact the project's success (Liang, Wu et al. 2018).

H7. The moderation effect between funder trust and funder risk positively impacts the crowdfunding campaign's success.

Rationale: The intent to purchase is affected by what buyers perceive, which can influence the actions of other buyers, as well as by knowledge shared in online communities (Schoorman 2007, Tamjidyamcholo, Bonsón Ponte, Carvajal-Trujillo, et al. 2015). In the crowdfunding context, funder risk and funder trust depend on how much the promoter is committed to the campaign. The moderation effect between the two influences the success of the fund raising initiatives (Zhao, Chen, et al. 2017).

IV RESULTS

We first conducted preliminary assessments of the datasets to gauge the validity of characteristics that help determine to reach the goal and summation for the campaigns, as shown in the appendices in **Figure**, **Figur**, **Figure** , and **Figure**. The initial analysis show that about 50% of crowdfunding campaigns failed to raise 20% of their goal, and about 10% failed to raise 50% of their goal. The project description is a crucial characteristic of crowdfunding campaigns, as it describes the promoter's project in a few words to catch the attention of funders. However, an initial analysis of the data suggested that 30% of campaigns with description lengths of 50 or more characters failed to meet the goal, while about 40% of successful campaigns have 50 or more characters in the project description. These characteristics are thus treated as quality signals of data rather than to shape the success or failure of crowdfunding campaign. We conducted path analysis, as defined in the statistical analysis section, and obtained path coefficients to determine the variance that can explain the model. As quantified by the results from the statistical examination, 72% of the variance due to funder trust ($R^2 = 0.72$). The promoters explained about 38% of the variance in the promoter's commitment ($R^2 = 0.38$), and about 48% of crowdfunding success variance was explained by funder risk, funder trust, the strength of the promoter's social networks, and funder commitment ($R^2 = 0.87$).



Significance levels: *p < 0.001 and **t >= 3.29.

Figure 3 – Results of Path SmartPLS analysis

Table 15 shows the correlations among constructs. The correlations between the critical variables in our study are below 0.8, which indicates that no multicollinearity exists in independent and control variables. **Table** in the appendices shows the correlation among all variables in this study.

Table 15 – Correlation Among Constructs

Correlation Matrix	Promoter Commitment	Funder's Trust	Social Strength	Funder's Risk	Campaign Success
Promoter Commitment	1				
Funder's Trust	.749**	1			
Social Strength	.638**	.498**	1		
Funder's Risk	-.594**	-.783**	-.398**	1	
Campaign Success	.977**	.766**	.653**	-.608**	1

Note: ****CORRELATION SIGNIFICANT AT THE 0.01 LEVEL (2-TAILED)**

Table 16 provides a summary of the descriptive statistics of key variables in this study.

Table 16 – Summary of the Descriptive Statistics of Key Variables

	MINIMUM	MAXIMUM	MEAN	STD. DEVIATION
DAYS	1	362	34	13
GOAL	$0.00	$100,000,000.00	$47,891.30	$1,205,907.64
AMOUNT PLEDGED	$0.00	$10,266,845.00	$11,187.89	$83,547.56
BACKERS COUNT	0	105,857	133	923
PROMOTER UPDATES	1	599	187	195
PROMOTER CREATED	1	89	34	27
PROMOTER BACKED	0	399	152	121
PROMOTER COMMENTS	0	4,999	1,867	1,559
NEW FUNDERS	0	44,877	41	308
RETURNING FUNDERS	0	88,920	92	674
SOCIAL CAPITAL	0	16,133,977	6,703	38,617
FAQ COUNT	0	54	1	0
AMOUNT PLEDGED PERCENTAGE	0	41,535	3	176
COLLABORATION COUNT	0	2,499	743	796
FUNDER COMMENTS	0	17,652	4,460	4,785
VALID N (LISTWISE)	182216			

Table 17 summarizes the results of the regression analysis of the hypotheses.

Table 17 – Outcome of the Results for Hypotheses

	H1, H2, H3, H4, H5, H6, and H7		
Predictors	**Dependent Variables**		
	Promoter commitment	**Funder trust**	**Campaign success**
Independent Variables			
Social Strength	0.61*	0.11*	
Funder Risk		-0.10*	-0.32*
Funder Trust			0.73*
Moderating Effect Funder Trust * Funder Risk			0.30*
Promoter Commitment		0.71*	
Control Variable(s)			
Funding Goal	-0.02*	0.00*	0.00*
Funding Duration	-0.05*	-0.01*	-0.02*
Overall Model			
R^2	0.38	0.72	0.87

Significance levels: *p < 0.001 and *t >= 3.29.

Hypotheses H1 and H2 suggest that the strength of the promoter's social ties is positively associated with funder's trust and the promoter's commitment. The promoter with a strong social network is committed more to the campaign ($\beta = 0.61$ and $p < 0.01$), and the promoter's social network also has a statistically sizable effect on funder's trust ($\beta = 0.11$, $p < 0.01$), which braces our first two hypotheses (H1 and H2). We suggest in H3 that the promoter's commitment has a affirmative effect on increasing funder's trust. The better the promoter's commitment, the more the funder's trust is supported statistically ($\beta = 0.71$, $p < 0.01$). In hypotheses 4 and 5, we suggested that funder risk harms funder trust and that the lower the funder risk, the better the trust and crowdfunding success. Funder risk has a statistically negative impact on funder trust ($\beta = -0.10$, $p < 0.01$) and crowdfunding success ($\beta = -0.32$, $p < 0.01$), thus substantiating hypotheses

H4 and H5. In H6, as we suggested that a higher level of funder faith leads to the crowdfunding campaign's success. Funder trust was found to have a statistically significant positive impact on crowdfunding success, which supports H6. For H7, we tested the moderation effect between the funder risk and funder trust. There is statistically significant moderation in our data analysis ($\beta = 0.30$, $p < 0.01$). Using the smartPLS software, we performed the slope analysis of the moderation effect between funder trust and funder risk on the dependent variable campaign's success, shown in **Figure** in the appendices. Table 18 summarizes the hypothesis results and summary discussed above.

Table 18 – Hypotheses Summary

HYPOTHESIS	RESULTS	SUMMARY
H1: A positive association exists between the strength of the promoter's social network ties and the promoter's commitment	SUPPORTED	Promoter having a robust social network has a statistically notable impact on promoter commitment ($\beta = 0.61$ and $p < 0.01$, $t = 435.18$)
H2: A positive correlation exists between the promoter's social network ties and funder trust	SUPPORTED	Promoters having strong social ties has a statistically compelling effect on funder trust ($\beta = 0.11$, $p < 0.01$, $t = 61.72$)
H3: Promoter commitment is positively associated with funder trust	SUPPORTED	Promoter commitment has a statistically noteworthy effect on funder's trust ($\beta = 0.71$, $p < 0.01$, $t = 401.52$)
H4: A negative correlation exists between funder risk and funder trust	SUPPORTED	Funder risk has a statistically important negative impact on funder trust ($\beta = -0.10$, $p < 0.01$, $t = 51.59$)
H5: Funder risk and campaign success have a negative correlation	SUPPORTED	Funder risk has a robust negative impact on crowdfunding campaign success ($\beta = -0.32$, $p < 0.01$, $t = 249.27$)
H6: Funder trust and crowdfunding campaign success are correlated positively	SUPPORTED	Funder trust has a statistically meaningful unequivocal impact on crowdfunding campaign success ($\beta = 0.71$, $p < 0.01$, $t = 401.52$)
H7: The moderation effect between funder trust and funder risk positively impacts the crowdfunding campaign's success	SUPPORTED	The moderation effect between funder trust and funder risk positively impacts crowdfunding campaign success ($\beta = 0.32$, $p < 0.01$, $t = 249.27$)

Significance levels: *p < 0.001 and **t >= 3.29.

V DISCUSSION

V.1 Key Findings of our Study

This section aims to highlight our key findings regarding what increases funder trust or intention to fund, applying SCT and demonstrating the need to extend the approach to the crowdfunding context. Based on SCT, the promoter's online network ties are a crucial factor that impacts funder trust and reduces funder perceived risk, which, in turn, increases funder intention to fund. As most crowdfunding campaigns run for shorter durations, funder behavior and promoter commitment to deliver are significant components that sways the success of a campaign. In this study, we examined social capital's impact on crowdfunding and the elements that lead to a campaign reaching the goal. Drawing on the theory, we confirm that strong social network ties in a promoter can maximize the likelihood of a successful campaign. Discrimination and bias is prevalent in bank loans, venture capital, and angel investing methods of finances, and crowdfunding provides a new method of raising funds. The monetary needs of early-stage firms can thus be met without having to reveal much personal information about geography and beliefs (Stevenson, Kuratko, et al. 2018). Crowdfunding platforms are gaining greater popularity compared to other forms of financing options because they enable promoters and funders to collaborate, which generates an intellectual knowledge base, leads to fewer regulations, and encourages innovative ideas to be commercialized (Medina-Molina, Rey-Moreno et al. 2019).

Our study confirms that having robust social network increases the likelihood of a campaign being successful, in consonance with prior research studies (Belleflamme, Lambert et al. 2014, Liang, Wu et al. 2018). The corollaries of this work have ramifications for future research opportunities. To boost the success rate in funding initiatives, we used SCT as a foundation and extended it to the context of crowdfunding. We focused on SCT's market dimension and resourced social capital on the promoter's network in this research. We found that

tapping into social capital from a robust social network provides benefits for the promoter. We demonstrated the negative effect of funder risk on funder trust and a positive influence of funder trust on the success of a fundraising campaign. Our findings are unswerving with those of previously published studies (Zhao, Chen, et al. 2017, Wang, Liu, et al. 2018). This study supports the statistical effect of funder trust on crowdfunding campaign success.

V.2 Study Contributions

This study tenders to the literature on SCT and adds to the knowledge on crowdfunding campaign for business managers. Based on evidence from the data analyzed, we demonstrated that promoter commitment has a statistically significant impact on funder trust. Crowdfunding promoters must persuade funders to maintain their communication and trust. Funder trust strengthens the success of a campaign. Therefore, maintaining a strong relationship and improving funder trust and perks are critical for the success of crowdfunding campaigns. We strongly suggest that to increase funder trust, campaign managers should ensure promoter commitment. Regardless of whether projects are successful, timely updates provided in the form of comments are important, as a rapid response from promoters allows funders to deepen their trust and lowers their perceived risk. Trust, credibility, and funder confidence, and thus intent to fund, are also increased by promoter involvement in other projects, social network updates, and a history of the funder backing different projects. In addition, to increase funder confidence and reduce perceived risk, promoters should place more emphasis on showcasing their capabilities by providing concrete project updates to dispel doubts among funders. Crowdfunding is still an evolving phenomenon within the industry, with research on it in an embryonic stage, and a considerable portion of research work have concluded their analysis from the viewpoint of online web portals. This study is one of few to gather supporting work into a common framework, and

in addition, it applied SCT to the context of fundraising campaigns to investigate the critical elements that had a compelling effect on the success of crowdfunding campaigns. In this context, the SCT is consistent with the results and the research question.

V.3 Limitations and Future Research

While our study has introduced SCT to the context of crowdfunding, it is not without limitations. This study did not focus on geography, culture, legislation, or other traditional determinants. In addition, this study is limited to the realm of crowdfunding based on rewards. Crowdfunding for equity swaps, which is governed by the SEC and is subject an entirely different set of regulations, was not considered. Thus, future research should focus on cultural differences and other types of crowdfunding. However, due to differences in what motivates funders to invest differs and disparateness is likely even within these two methods, though, in principle, the campaign format and expected outcome are similar. In addition, we did not include many exceptions, such as campaigns that lacked a social network but were successful due to, for example, a good project narrative and attractiveness of the project to funders.

Furthermore, many famous artists and bands do not need social networks to promote themselves, and only a few days of fundraising might be required. Additionally, the study is limited to considering social network ties as a factor that impacts the success of fundraising initiatives. Nevertheless, the increasing popularity of established firms that promote products in crowdfunding platforms and organizations, as a network can impact products promoted can be of interest to future researches. Finally, our study considered the benefits or tangible rewards for funders, though other forms of compensation, such as services and events, are increasingly found. These could be the subject of future study. The activities generated and comments exchanged between promoters and funders are of significant value if analyzed from a

phycological perspective to understand the characteristics of funders and can lead to further future research. The crowdfunding industry is evolving, as is the technology that connects promoters and funders. Technology disruptions such as improvements in virtual technologies, cybersecurity, and blockchain can revolutionize crowdfunding-based businesses. In crowdfunding, funders are attracted to innovative ideas and collaborate with promoters, pitching them and for which funders must first be drawn by technologies that allow effective collaboration. Crowdfunding platforms are under pressure to use technology to sustain the model and generate revenues, which might change the industry itself. For online platforms, new means of generating revenues rely on attracting innovative promoters with new promotional instruments. For example, medical crowdfunding, lotteries, and auctions are on the rise, but the literature is underdeveloped. The adoption of technology created many new industries or for not doing so, had put away many businesses over time. Future research on the sustainability of and changes in technology in the crowdfunding industry will help many small business entrepreneurs who use crowdfunding as an alternative source to realize their ideas. Better understanding the influence of institutions that support both formally and informally the transformation of social capital will help to frame policies to help entrepreneurs turn their firms into social enterprises.

V.4 Practical Implications

In the context of crowdfunding offering an alternative method to raise capital for various causes, this study provides insights into how crowdfunding operates. Our findings are distinct from those of prior studies on three actor dimensions in the crowdfunding paradigm: first, the start-up firms that are considering starting a campaign in search of raising capital; second, the funders who are potential investors looking for innovative products as rewards; third, the online platforms that connect them. Social capital, funder trust, and promoter commitment together can

greatly increase the success of campaigns. Most small business entrepreneurs consider crowdfunding either because they incompetent in obtaining other methods of financing or because they have a creative idea in the development stage and want to market it to a larger crowd, expecting to turn the funders into future customers. Often, failure to secure funds may threaten the existence itself; our study provides and underlines the importance of transforming social capital into economic benefits for entrepreneurs. As the failure rate of crowdfunding is generally higher than that other forms of financing options, social networks play a cruical part in gaining the trust and authenticity by first circulating ideas within the network before crowdfunding initiatives begin. For promoters, once the funders have begun to trust them, and when the campaign completes with a lower cost of capital.

Furthermore, the funder's perceived risk or willingness to pay for an innovative product depends on the trust. The information generated in social networks increased the trust and lowered the perceived risk of funders. The social networks could potentially be used by businesses that act as marketing agents to increase promoter images in online blogs and social platforms. For funders, the study provides an understanding of social capital and treats opportunities to create meaningful conversations as part of a network. For online platforms, the study is helpful in a way to support the promoters based on which they can increase their revenue base. As also noted in our future research opportunities, the better the technology platform, the better the online platforms will attract innovative products to be listed. The more the innovation happens, funders participate more to know the product, which increases the social capital and the economic value contributed to society.

However, promoters' competitors can engage intermediaries to spread information on social networks that might adversely impact the campaign. In addition, despite delivering the

products as promised, just one missed opportunity by a promoter might lead to distrust among the funders. The promoters should make genuine attempts to deliver the project as promised and continue to disclose as much information as possible to drive the campaign towards success. Funders should also be aware of fraud, as with any forms of financing, and the crowdfunding platforms provide little or no help to meaningfully signal fraud. This uncertainty and information asymmetry is a risk to potential funders, and the more the access to information they have, the better they understand who, what, and why they fund. Non-equity crowdfunding is by nature risky, as a funder is attracted to a future promise of an innovative idea or unfinished product as a reward. In addition, non-equity-based crowdfunding is mostly unregulated. The absence of regulations in the industry can lead to potential fraudulent campaigns. The promoter's successful fundraising is perceived to be positive by funders and confer information on the same on social sites. This certainty of lower risk as seen by funders leads to funders returning to fund more or in additional funders being attracted to subsequent campaigns by promoters. This paper provides further testimony of the social capital's role, the significance of promoter commitment and the importance of promoter keeping their promises to gain the trust of funders to succeed in their crowdfunding endeavors.

VI CONCLUSIONS

This study achieved its goal by empirically confirming the relationship between social network ties and crowdfunding campaigns using SCT as a theoretical framework. Soliciting funds from the masses has grown into an alternative mode to conventional methods of financing for early-stage startups to realize their ideas. Entrepreneurs throughout the world add millions of dollars to the economy. This study aimed to examine funders in crowdfunding platforms for successful fundraising. The framework provides a robust new approach to combinative mechanisms of crowdfunding campaigns and the role of social capital. Funders always seek new innovative ideas and are promotion-focused. From a business perspective, by paying attention to this ever-changing landscape, crowdfunding campaign managers can emphasize developing innovative products tailored to the needs of funders and can thus increase contributions to campaigns to benefit funder and promoter alike.

VII APPENDICES

Table 19– Appendix Table: Data Analysis Details

Category	Success	Failed	Total Backers	Total Funded	Total Records
Art	9,443	8,650	906,497	$67,091,742	18,093
Comics	6,060	1,827	1,436,887	$69,960,830	7,887
Crafts	2,295	3,445	234,512	$14,474,279	5,740
Creative Works	4	0	5,277	$459,287	4
Dance	2,394	700	157,385	$12,901,169	3,094
Design	3,773	2,729	1,948,716	$166,038,700	6,502
Fashion	5,978	4,856	1,317,879	$124,426,624	10,834
Film & video	13,360	11,251	2,313,113	$207,418,765	24,611
Food	5,215	10,012	979,338	$90,914,193	15,227
Games	6,702	4,874	5,859,277	$343,672,995	11,576
Journalism	1,088	3,325	201,565	$13,856,781	4,413
Music	15,779	8,914	1,548,106	$109,953,706	24,693
Photography	3,216	3,804	374,432	$31,869,108	7,020
Publishing	11,402	5,851	1,823,722	$106,885,984	17,253
Tech & Innovation	154	0	201,558	$38,758,465	154
Technology	6,332	12,323	4,697,912	$613,274,934	18,655
Theater	4,574	1,886	317,351	$26,655,016	6,460
Overall	**93,769**	**84,447**	**24,323,527**	**2,038,612,578**	**182,216**

Table 20 – Appendix Table: SPSS Model Fit Analysis

	Model 1		Model 2		Model 3		Model 4	
	Beta	T-value	Beta	T-value	Beta	T-value	Beta	T-value
Promoter Commitment	0.977 *	1965.638	0.919 *	1263.25	0.891 *	1102.965	0.891 *	1102.827
Funder's Trust			0.078 *	106.797	0.076 *	105.411	0.074 *	79.772
Social Strength					0.046 *	74.692	0.046 *	74.67
Funder's Risk							-.002*	-2.887

Significance levels: *p < 0.001 and **t>= 3.29.

Table 21 – Appendix Table: SmartPLS Model Fitness Measures

		Saturated Model	Estimated Model
SRMR	Standardized Mean Square Residual	0.03	0.126
d_ULS	Squared Euclidean Distance	0.04	0.57
d_G	Geodesic Distance	0.06	0.36
Chi-Square	Chi^2	54276.09	233417.77

NFI	Normed Fit Index	0.955	0.806

*SRMR < 0.08 and NFI > 0.90 using SmartPLS' bootstrap to compute the model considered a good fit, the closer the NFI to 1, the better fit the model is. d_ULS and d_G non-significant value (> 0.005)

Table 22– Appendix Table: Construct Reliability and Validity from SmartPLS

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted
Funder's Trust		1.00		
Funders' Risk		1.00		
Moderating Effect 1	1.00	1.00	1.00	1.00
Campaign Success		1.00		
Promoter Commitment	0.86	0.86	0.92	0.79
Social Capital	1.00	1.00	1.00	1.00

*Cronbach Alpha: A measure of the extent to which variables positively related to each other (> 0.7 considered good)
*Average Variance Extracted (AVE; > 0.5 considered good)
*Composite Reliability: A measure reliability of indicators (CR; > 0.5 considered good)

Table 23– Appendix Table: SmartPLS Factor Loading (Outer Loading)

	Funder's Trust	Funders' Risk	Moderating Effect 1	Campaign Success	Promoter Commitment	Social Strength
Funders' Risk * Funder's Trust			0.854			
funder_comments	0.87					
funders_risk		1				
project_success				1		
promoter_backed					0.888	
promoter_comments	0.946					
promoter_created					0.889	
promoter_updates					0.882	
social_strength						1

Table 24 – Appendix Table: Correlation Matrix of variables in the study

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. days	1															
2. goal	.026**	1														
3. pledged	.021**	.009**	1													
4. Backers_count	.007**	.008**	.799**	1												
5. promoter_updates	-.082**	-.028**	.092**	.100**	1											
6. Promoter_created	-.085**	-.027**	.081**	.095**	.676**	1										
7. promoter_backed	-.088**	-.028**	.077**	.090**	.673**	.686**	1									
8. promoter_commente	-.087**	-.029**	.082**	.096**	.692**	.707**	.706**	1								
9. Funder_comments	-.082**	-.026**	.081**	.089**	.639**	.650**	.647**	.665**	1							
10. new_backers	0.00	.008**	.664**	.854**	.091**	.090**	.083**	.089**	.083**	1						
11. Returning_backers	.005*	.007**	.775**	.968**	.093**	.091**	.087**	.092**	.085**	.712**	1					
12. social_capital	-.015**	-.005*	.019**	.020**	.133**	.126**	.126**	.129**	.120**	.018**	.019**	1				
13. Faq_count	0.00	0.00	.151**	.077**	.016**	-.022**	-.022**	-.020**	-.010**	.084**	.070**	.006**	1			
14. pled_percent	0.00	0.00	.009**	.011**	.016**	.014**	.014**	.013**	.011**	.007**	.012**	0.00	0.00	1		
15. colab_count	-.081**	-.026**	.081**	.092**	.640**	.647**	.647**	.663**	.609**	.082**	.089**	.122**	.017**	.012**	1	
16. project_success	-.102**	-.033**	.111**	.121**	.819**	.825**	.823**	.845**	.779**	.109**	.113**	.158**	.017**	.018**	.780**	1

**Correlation is significant at the 0.01 level. *Correlation is significant at the 0.05 level (2-tailed)

Table 25 - Appendix Table: Crowdfunding Characteristics from Selected Studies

Articles	Article 7	Article 8	Article 9	Article 10	Article 11	Article 12
AUTHOR(s)	Mollick 2014	Beier and Wagner 2015	(Colombo, Franzoni, et al. 2015)	Agrawal, Catalini, et al. 2015	Burtch, Ghose et al. 2015	**Kuppuswamy and Bayus 2017**
FUNDING MEASURES OF SUCCESS	Funded, Goal, Funded %, Backers,	On-Page Communication, Project Presentation, Project Updates, Off-Page Communication	Duration, target capital, number of visuals, number of links to external websites	Funders ' the propensity to invest, Accumulated Capital, Funder's proximity	Treatment, Campaign Balance, User Mobile, User Balance,	**Goal gradient effect, Funding goal,**
DETERMINANTS OF FUNDING SUCCESS	Pledge/Backer, Updates, Comments	Homepage	backer's choice, ego-boosting, internal social capital	Artist Social Capital,	Contribution	**Backer Support**
VARIABLES – TIME INVARIANT	Funded, Goal, Funded %, Backers, Pledge/Backer, Updates,	Number of photos, Number of videos, communication, project updates	Success, Early backers, early capital, duration	Funders' propensity to invest, Accumulated Capital, Funder's	Campaign Balance, Campaign Days, Unconditional Contribution	**Project quality, Project creator characteristics**
VARIABLES – TIME-DEPENDENT	Duration, Observations	Social capital	External social capital, number of visuals, number of videos	Value perception	Day of the week, User Tenure, Time Effects	**Target goal,**

Table 26– Appendix Table: Crowdfunding Characteristics from Selected Articles (contd.)

Articles	Article 1	Article 2	Article 3	Article 4	Article 5	Article 6
AUTHOR(s)	Gerber, E. M. and J. Hui 2012.	Mitteness, Baucus, et al. 2012	Etter, Grossglauser, et al. 2013	Maxwell and Lévesque 2014	Zheng, H., et al. 2014	**Belleflamme, Lambert et al. 2014**
FUNDING MEASURES OF SUCCESS	Raise funds, expand awareness of work, Form connections, Gain approval	Funder's interest, proceed to due diligence, investing	Campaign success, Number of first-time backers, Number of other projects with standard backers	Trust, Capability, Communication	Crowdfunding performance	**Number of crowd funders, Fixed amount of money needed to start production Baseline quality of the good Total profits of the entrepreneur**
DETERMINANTS OF FUNDING SUCCESS	Inability to attract supporters, Fear of public	Investment Criteria, Investment experience	Number of tweets, replies, and retweets	trust-damaging behaviors, trust-violating behaviors	Culture	**Community benefits for crowd funders**
VARIABLES – TIME INVARIANT	Raise Funds (Creators) Gain Approval (Creators)	Funding potential, opportunity strength	Funding goal, Launch date, Duration	Technology, Market	Crowdfunding goal, Crowdfunding Duration	**Share of profits that the entrepreneur, Funding intention**
VARIABLES – TIME-DEPENDENT	Maintain Control (Creators)	Interest, Due-diligence	Sample time, Pledged money, Number of backers	Elimination, Performance and Relationship risks	Social network ties, Obligations, Shared meaning	**The price charged to consumers**

Figure 4– Data Validity and Distribution

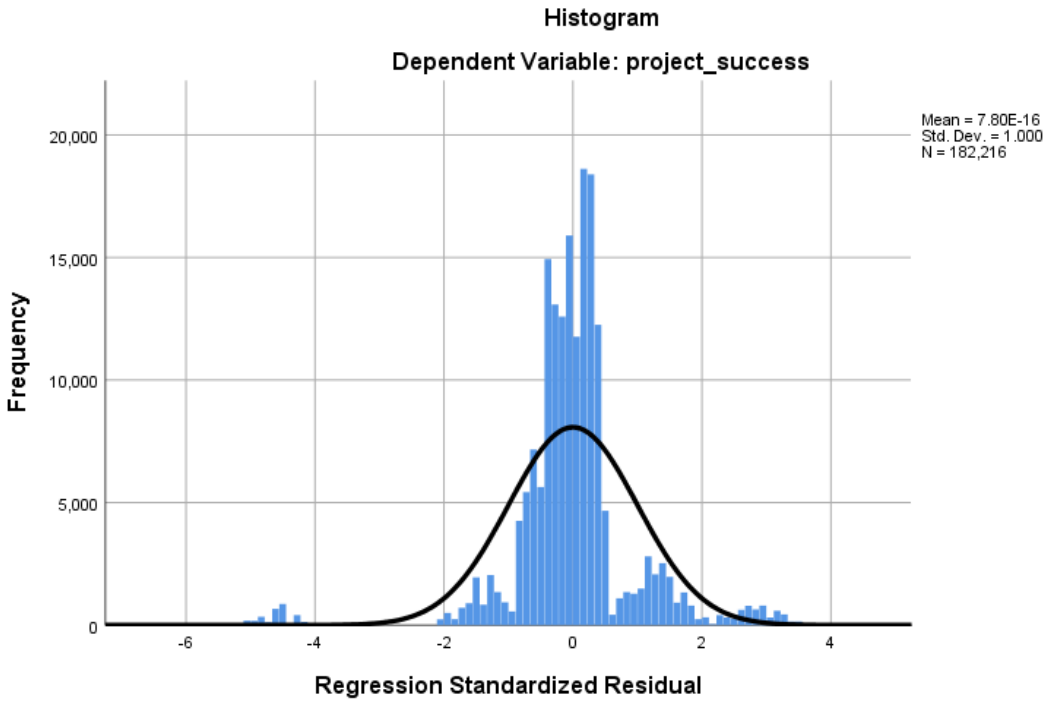


Figure 4 – Moderation Effect of Funder Trust and the Promoter Commitment

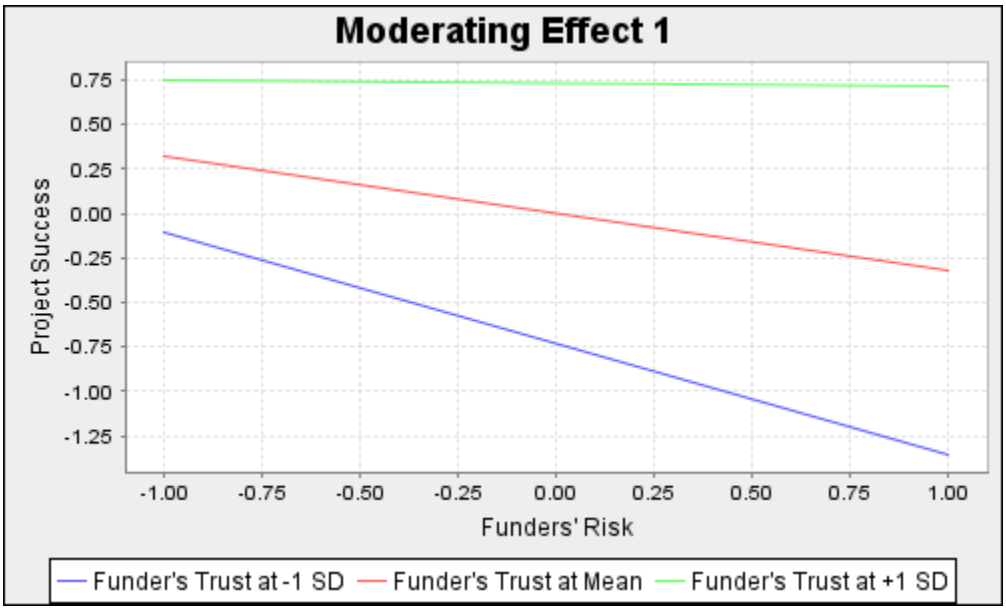


Figure 6– Funding Levels of Unsuccessful Projects

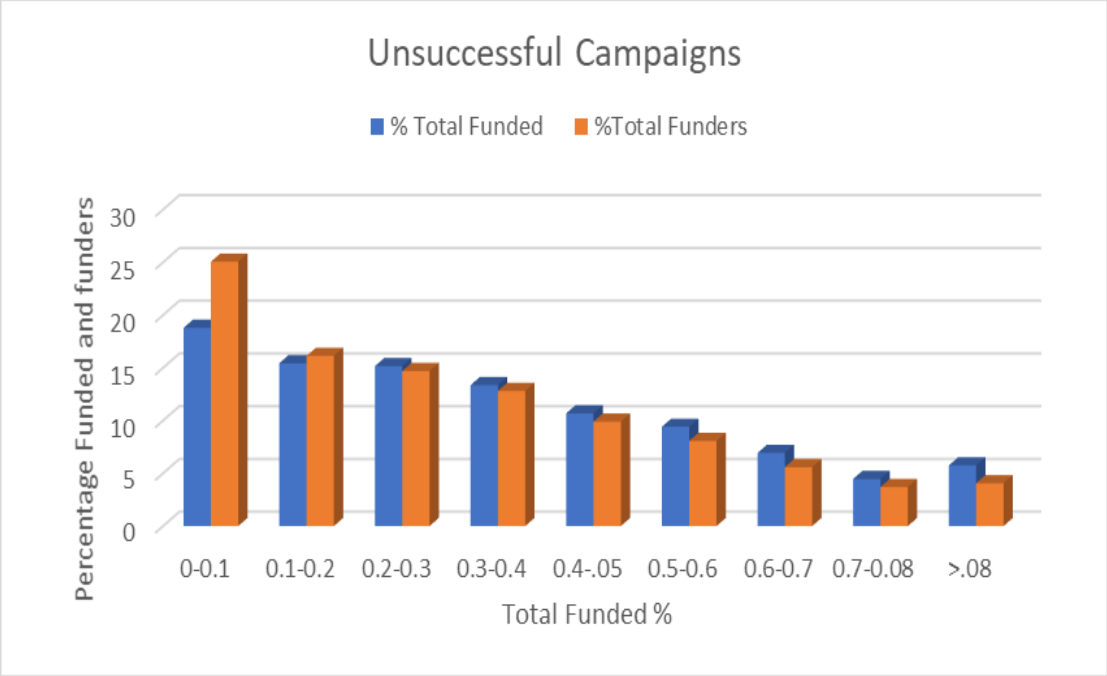


Figure 7– Funding Levels of Successful Projects

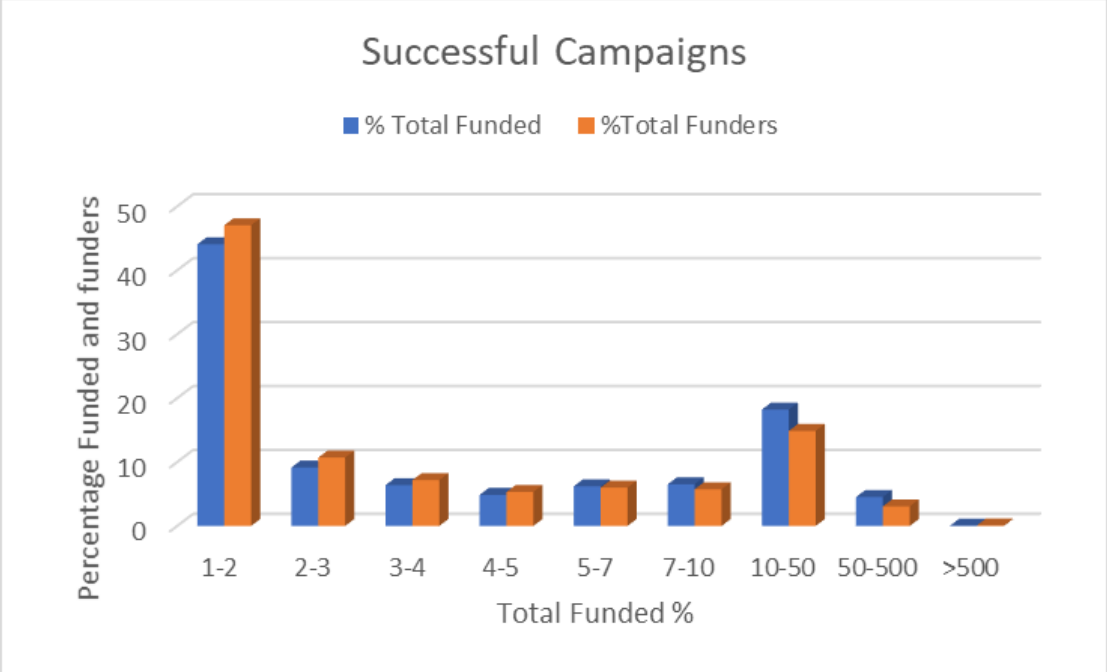


Figure 8 – Project Descriptions in Unsuccessful Projects

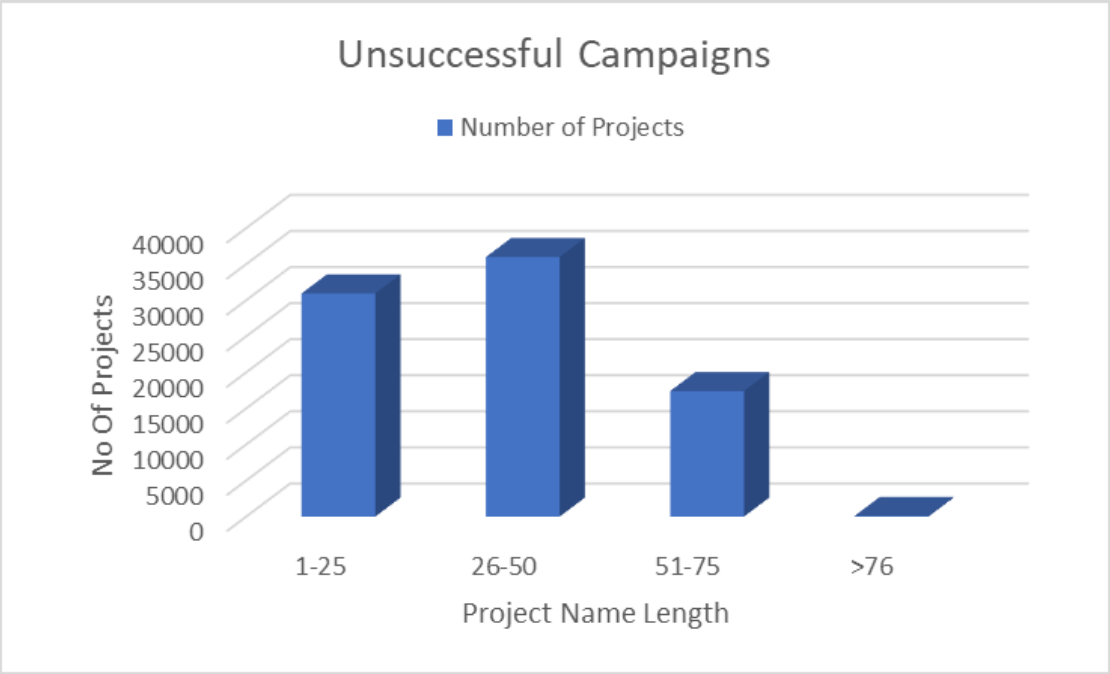
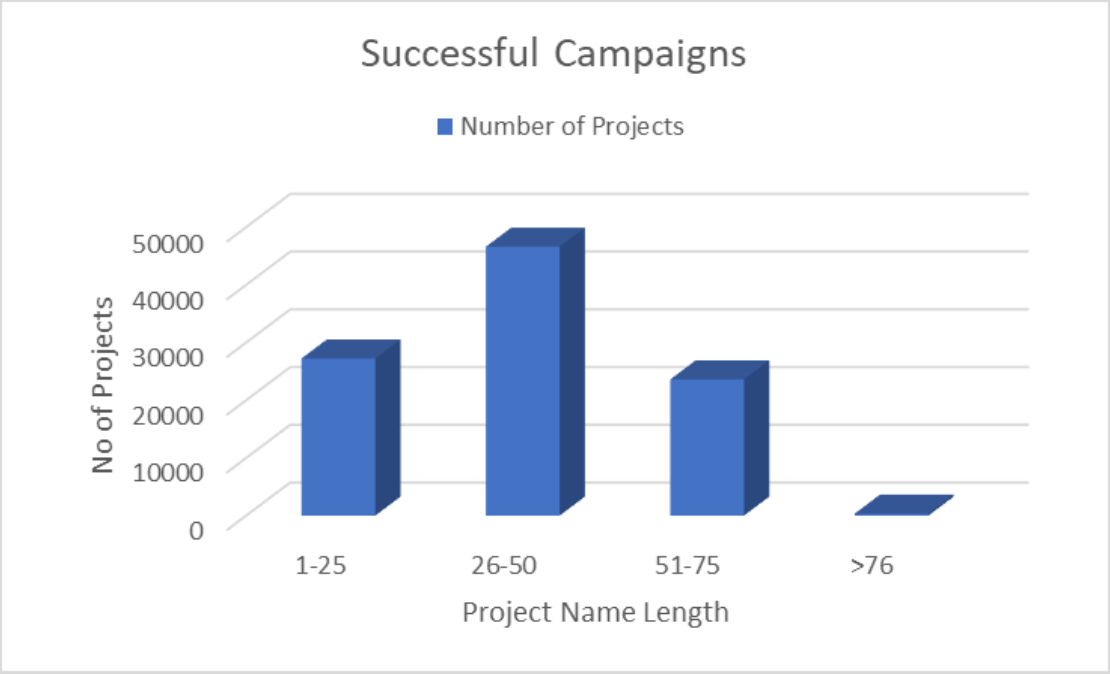


Figure 9 – Project Descriptions in Successful Projects



REFERENCES

Aaker, J. L., and S. Akutsu (2009). "Why do people give? The role of identity in giving." Journal of Consumer Psychology **19**(3): 267-270.

Abubakar, L., and T. Handayani (2019). "Venture Capital Regulation Reform: Revitalization of Venture Capital as an Alternatives Financing Mentorship and Partnership Based." Journal of private and commercial law **3**(1): 8-19.

Agrawal, A. et al. (2011). "The Geography of Crowdfunding." NBER Working Paper No. 16820, https://www.nber.org/papers/w16820.

Agrawal, A. et al. (2013). "Crowdfunding: Social Frictions in the Flat World?".

Agrawal, A. et al. (2014). "Some Simple Economics of Crowdfunding." Innovation Policy and the Economy **14**(1): 63-97.

Agrawal, A. et al. (2015). "Crowdfunding: Geography, Social Networks, and the Timing of Investment Decisions." Journal of Economics & Management Study **24**(2): 253-274.

Ahlers, G. K. C., et al. (2015). "Signaling in Equity Crowdfunding." Entrepreneurship: Theory & Practice **39**(4): 955-988.

Aknin, L. B., et al. (2013). "Making a difference matters: Impact unlocks the emotional benefits of prosocial spending." Journal of Economic Behavior & Organization **88**: 90-95.

Allison, T. H., et al. (2015). "Crowdfunding in a Prosocial Microlending Environment: Examining the Role of Intrinsic Versus Extrinsic Cues." Entrepreneurship Theory and Practice **39**(1): 53-73.

Alves, H., and B. Edvardsson (2019). Understanding Collaborative Advantage and Value Co-Creation Through Social Capital Theory. Proceedings of the International Conference on Intellectual Capital, Knowledge Management & Organizational Learning, Academic Conferences & Publishing International Ltd.

Aprilia, L. and S. S. Wibowo (2017). "The impact of Social Capital on Crowdfunding Performance." The South East Asian Journal of Management **11**(1): 44-57.

Arrow, K. (2000). Social capital : a multifaceted perspective. Washington, D.C, World Bank Publications.

Barnhart, C. and G. P. Dwyer (2012). "Returns to Investors in Stocks in New Industries." Economic Inquiry **50**(4): 1031-1049.

Baum, J. A. C., and B. S. Silverman (2004). "Picking winners or building them? Alliance, intellectual, and human capital as selection criteria in venture financing and performance of biotechnology startups." Journal of Business Venturing **19**(3): 411-436.

Beckwith, J., and P. Yildirim (2016). "Predicting Success in Equity Crowdfunding." Joseph Wharton Scholars. Available at http://repository.upenn.edu/joseph_wharton_scholars/25.

Beier, M., and K. Wagner (2015). "Crowdfunding Success: A Perspective from Social Media and E-Commerce." Thirty Sixth International Conference on Information Systems, Fort Worth.

Belleflamme, P., et al. (2013). "Individual crowdfunding practices." Venture Capital **15**(4): 313-333.

Belleflamme, P., et al. (2014). "Crowdfunding: Tapping the right crowd." Journal of Business Venturing **29**(5): 585-609.

Belleflamme, P., et al. (2015). "The economics of crowdfunding platforms." Information Economics and Policy **33**: 11-28.

Benbasat, B. X. I. (2011). "Product-Related Deception in E-commerce: A Theoretical Perspective." MIS Quarterly **35**(1): 169-195.

Bento, N. et al. (2018). "Do crowdfunding returns reward risk? Evidences from clean-tech projects." Technological Forecasting and Social Change.

Berger, A. N., and G. F. Udell (1998). "The economics of small business finance: The roles of private equity and debt markets in the financial growth cycle." Journal of Banking & Finance **22**(26): 613-673.

Berns, J. P., et al. (2018). "Dynamics of Lending-Based Prosocial Crowdfunding: Using a Social Responsibility Lens." Journal of Business Ethics **161**(1): 169-185.

Bernthal, J. B., and B. Young (2018). "The Evolution of Entrepreneurial Finance: A new topology." University Law Review, **2018**(4): 773-858.

Bhandari, H., and K. Yasunobu (2009). "What is Social Capital? A Comprehensive Review of the Concept." Asian Journal of Social Science **37**(3): 480-510.

Blanchard, Q. (2018). "The intellectual property within the Kickstarter funding method." PM World Journal **7**(3): 1-7.

Blau, P. M. (1964). Exchange and Power in Social Life. New York, John Wiley & Sons, Inc.

Block, J., et al. (2017). "Which updates during an equity crowdfunding campaign increase crowd participation?" Small Business Economics **50**(1): 3-27.

Block, J. H., et al. (2017). "New players in entrepreneurial finance and why they are there." Small Business Economics **50**(2): 239-250.

Bonsón Ponte, E., et al. (2015). "Influence of trust and perceived value on the intention to purchase travel online: Integrating the effects of assurance on trust antecedents." Tourism Management **47**: 286-302.

Brem, A. et al. (2019). "How crowdfunding platforms change the nature of user innovation – from problem solving to entrepreneurship." Technological Forecasting and Social Change **144**: 348-360.

Bringmann, K., et al. (2018). "Venture capital: The effect of local and global social ties on firm performance." Papers in Regional Science **97**(3): 737-755.

Brown, J. R., and I. V. Floros (2012). "Access to private equity and real firm activity: Evidence from PIPEs." Journal of Corporate Finance **18**(1): 151-165.

Brown, R. et al. (2018). "Start-ups, entrepreneurial networks, and equity crowdfunding: A processual perspective." Industrial Marketing Management.

Brown, T. E., et al. (2017). "Seeking funding in order to sell: Crowdfunding as a marketing tool." Business Horizons **60**(2): 189-195.

Bruton, G. et al. (2015). "New Financial Alternatives in Seeding Entrepreneurship: Microfinance, Crowdfunding, and Peer-to-Peer Innovations." Entrepreneurship Theory and Practice **39**(1): 9-26.

Burtch, G., and J. Chan (2019). "Investigating the Relationship Between Medical Crowdfunding and Personal Bankruptcy in the United States: Evidence of a Digital Divide." MIS Quarterly **43**(1): 237-262.

Burtch, G., et al. (2013). "An Empirical Examination of the Antecedents and Consequences of Contribution Patterns in Crowd-Funded Markets." Information Systems Research **24**(3): 499-519.

Burtch, G., et al. (2015). "The hidden cost of accommodating crowdfunder privacy preferences: A randomized field experiment." Management Science **61**(5): 949–962.

Butticè, V. et al. (2017). "Serial Crowdfunding, Social Capital, and Project Success." Entrepreneurship Theory and Practice **41**(2): 183-207.

Cai, C. W. (2018). "Disruption of financial intermediation by FinTech: a review on crowdfunding and blockchain." Accounting & Finance **58**(4): 965-992.

Calic, G., and E. Mosakowski (2016). "Kicking Off Social Entrepreneurship: How A Sustainability Orientation Influences Crowdfunding Success." Journal of Management Studies **53**(5): 738-767.

Camp, J., and S. Kuselias (2018). "Introducing U.S. equity crowdfunding: Potential Risks and Tax Implications." Tax Adviser: 13-16.

Cassar, G. (2004). "The financing of business start-ups." Journal of Business Venturing **19**(2): 261-283.

Cecere, G. et al. (2017). "Crowdfunding and social influence: an empirical investigation." Applied Economics **49**(57): 5802-5813.

Chang, C.-M., and M.-H. Hsu (2016). "Understanding the determinants of users' subjective well-being in social networking sites: an integration of social capital theory and social presence theory." Behaviour & Information Technology **35**(9): 720-729.

Chang, C.-M. et al. (2015). "Factors Influencing Knowledge-Sharing Behavior in Virtual Communities: A Longitudinal Investigation." Information Systems Management. **32**(4): 331-340.

Chiu, C.-M. et al. (2006). "Understanding knowledge sharing in virtual communities: An integration of social capital and social cognitive theories." Decision Support Systems **42**(3): 1872-1888.

Cholakova, M., and B. Clarysse (2015). "Does the Possibility to Make Equity Investments in Crowdfunding Projects Crowd Out Reward-Based Investments?" Entrepreneurship Theory and Practice **39**(1): 145-172.

Choy, K. et al. (2016). "Crowdsourcing for a better world." Information Technology & People **29**(1): 221-247.

Coleman, J. S. (1998). "Social Capital in the Creation of Human Capital." American Journal of Sociology **94**: S95-S120.

Colombo, M. G., et al. (2019). "The geography of venture capital and entrepreneurial ventures' demand for external equity." Research Policy **48**(5): 1150-1170.

Colombo, M. G., et al. (2015). "Internal Social Capital and the Attraction of Early Contributions in Crowdfunding." Entrepreneurship Theory and Practice **39**(1): 75-100.

Cosh, A. D., et al. (2009). "Outside Entrepreneurial Capital." The Economic Journal **119**(540): 1494–1533.

Crosetto, P., and T. Regner (2018). "It's never too late: Funding dynamics and self pledges in reward-based crowdfunding." Research Policy **47**(8): 1463-1477.

Cryder, C. E. et al. (2013). "Goal gradient in helping behavior." Journal of Experimental Social Psychology **49**(6): 1078-1083.

Cumming, D. et al. (2016). "Disentangling Crowdfunding from Fraudfunding." Max Planck Institute for Innovation & Competition(16-09): 62.

Cumming, D., and S. Zambelli (2017). "Due Diligence and Investee Performance." European Financial Management **23**(2): 211-253.

Cumming, D. J., et al. (2020). "Disentangling Crowdfunding from Fraudfunding." Max Planck Institute for Innovation & Competition Research Paper No. 16-09. Available at SSRN: https://ssrn.com/abstract=2828919 or http://dx.doi.org/10.2139/ssrn.2828919.

Cumming, D. J., and S. Vismara (2016). "De-segmenting research in entrepreneurial finance." Venture Capital **19**(1-2): 17-27.

Dai, H., and D. J. Zhang (2019). "Prosocial Goal Pursuit in Crowdfunding: Evidence from Kickstarter." Journal of Marketing Research **56**(3): 498-517.

Damianov, D. S., and R. Peeters (2018). "Prize-Based Mechanisms for Fund-Raising: Theory and Experiments." Economic Inquiry **56**(3): 1562-1584.

Davis, B. C., et al. (2017). "Funders' positive affective reactions to entrepreneurs' crowdfunding pitches: The influence of perceived product creativity and entrepreneurial passion." Journal of Business Venturing **32**(1): 90-106.

Dong, W. et al. (2018). "Leveraging Financial Social Media Data for Corporate Fraud Detection." Journal of Management Information Systems **35**(2): 461-487.

Drover, W., et al. (2017). "Attributes of Angel and Crowdfunded Investments as Determinants of VC Screening Decisions." Entrepreneurship Theory and Practice **41**(3): 323-347.

Du, H., and W. Jiang (2015). "Do Social Media Matter? Initial Empirical Evidence." Journal of Information Systems **29**(2): 51-70.

Du, Z., and K. Wang (2017). More Options Make Crowdfunding Campaigns More Successful? Twenty-third Americas Conference on Information Systems. Boston, MA.

Du, Z., et al. (2019). "Promoting crowdfunding with lottery: The impact on campaign performance." Information & Management **56**(8): 103159.

Durlauf, S. N. (2002). "Symposium on Social Capital: An Introduction." The Economic Journal **112**: 790-795.

Dushnitsky, G., and D. Marom (2013). "Crowd Monogamy." Business Strategy Review **24**(4): 24-26.

Elbeltagi, I., and G. Agag (2016). "E-retailing ethics and its impact on customer satisfaction and repurchase intention." Internet Research **26**(1): 288-310.

Estrin, S., et al. (2018). "The evolution and adoption of equity crowdfunding: entrepreneur and investor entry into a new market." Small Business Economics **51**(2): 425-439.

Etter, V. et al. (2013). "Launch hard or go home!" Presented at COSN'13: Conference on Online Social Networks (2013), Northeastern University, Boston, MA, 2013: 177-182.

Fan, J. et al. (2019). A Social Capital Theory Perspective Of Continuous Exercise Behavior of Users on Online Health Communities. 2019 16th International Conference on Service Systems and Service Management (ICSSSM). Shenzhen, China**:** 1-8.

Fanning, K. and D. P. Centers (2016). "Blockchain and Its Coming Impact on Financial Services." Journal of Corporate Accounting & Finance **27**(5): 53-57.

Ferreira, J. J. M., et al. (2017). "Entrepreneurship research: mapping intellectual structures and research trends." Review of Managerial Science **13**(1): 181-205.

Fine, B. (2001). "Social Capital versus Social Theory: Political Economy and Social Science at the Turn of the Millennium." London: Routledge.

Fine, B. (2002a). "It Ain't Social, It Ain't Capital and It Ain't Africa." Studia Africana **13**: 18-33.

Fine, B. (2002b). "They F**k you up Those Social Capitalists." Antipode **34**: 796-799.

Florida, R., and C. Mellander (2017). "Rise of the Startup City." California Management Review **59**(1): 14-38.

Florin, J. et al. (2003). "A social capital model of high growth ventures." Academy of Management Journal **46(**3): 374-384.

Franke, N. et al. (2008). "Venture Capitalists' Evaluations of Start-Up Teams: Trade-Offs, Knock-Out Criteria, and the Impact of VC Experience." Entrepreneurship Theory and Practice **1**(1): 459-483.

FRED (2019). "Commercial Banks in the US." Retrieved 2/13/2020, 2020, from https://fred.stlouisfed.org/series/USNUM.

FTC (2015). "Crowdfunding Project Creator Settles FTC Charges of Deception." from https://www.ftc.gov/news-events/press-releases/2015/06/crowdfunding-project-creator-settles-ftc-charges-deception.

FTC (2019). "FTC case against backpack seller unpacks how law applies in crowdfunding." from https://www.ftc.gov/news-events/blogs/business-blog/2019/05/ftc-case-against-backpack-seller-unpacks-how-law-applies.

Gal-Or, E. et al. (2018). "Can platform competition support market segmentation? Network externalities versus matching efficiency in equity crowdfunding markets." Journal of Economics & Management Strategy **28**(3): 420-435.

Gedajlovic, E. et al. (2013). "Social Capital and Entrepreneurship: A Schema and Research Agenda." Entrepreneurship Theory and Practice **37**(3): 455-478.

Gerber, E. M., and J. Hui (2013). "Crowdfunding: motivations and deterrents for participation." ACM Transactions on Computer-Human Interaction **20**(6): 1-32.

Gerber, E. M., et al. (2012). Crowdfunding: Why People are Motivated to Post and Fund Projects on Crowdfunding Platforms. ACM Conference on Computer Supported Cooperative Work.

Gilsbach, E. D. (2017). "Crowdfunding: Simple Solutions to Big Liability." **74**(11): 10-10.

Gleasure, R., and J. Feller (2016). "Emerging technologies and the democratisation of financial services: A metatriangulation of crowdfunding research." Information and Organization **26**(4): 101-115.

Gleasure, R., and L. Morgan (2018). "The pastoral crowd: Exploring self-hosted crowdfunding using activity theory and social capital." Information Systems Journal **28**(3): 489-515.

Goldfarb, B. et al. (2008). "Does angel participation matter? An analysis of early venture financing." Robert H. Smith School of Business, University of Maryland.

Gompers, P. A., et al. (2020). "How do venture capitalists make decisions?" In Journal of Financial Economics **135**(1): 169-190.

Gonzales, A. L., et al. (2016). "Better everyone should know our business than we lose our house": Costs and benefits of medical crowdfunding for support, privacy, and identity." New Media & Society **20**(2): 641-658.

Greenberg, M. D., et al. (2013). "Crowdfunding Support Tools: Predicting Success & Failure." Extended Abstracts on Human Factors in Computing Systems: 1815–1820.

Griffin, Z. J. (2013). "Crowdfunding: Fleecing The American Masses." Journal of Law, Technology & the Internet **4**(2): 375-410.

Grootaert, C., and T. Van Bastelaer (2002). The Role of Social Capital in Development : An Empirical Assessment, Cambridge University Press.

Guan, X. et al. (2020). "Pricing and advertising for reward-based crowdfunding products in E-commerce." Decision Support Systems: 113231.

Guenther, C. et al. (2017). "Is the crowd sensitive to distance?—how investment decisions differ by investor type." Small Business Economics **50**(2): 289-305.

Guiso, L., et al. (2004). "<role of social capital in financial development.pdf>." American Economic Review **94**(3): 526-556.

Hair, Jr, J. F. (2014). A primer on partial least squares structural equations modeling (PLS-SEM). Los Angeles, Sage Publications.

Harrington, D. (2009). Confirmatory factor analysis. New York, Oxford University Press.

Hashim, K. F., and F. B. Tan (2015). "The mediating role of trust and commitment on members' continuous knowledge sharing intention: A commitment-trust theory perspective." International Journal of Information Management **35**(2): 145-151.

Hassan Zadeh, A. and R. Sharda (2014). "Modeling brand post popularity dynamics in online social networks." Decision Support Systems **65**: 59-68.

Homans, G. C. (1958). "Social behavior as exchange." American Journal of Sociology **63**(6): 597-606.

Hong, I. B., and H. Cho (2011). "The impact of consumer trust on attitudinal loyalty and purchase intentions in B2C e-marketplaces: Intermediary trust vs. seller trust." International Journal of Information Management **31**(5): 469-479.

Hornuf, L. and M. Schmitt (2016). "Success and Failure in Equity Crowdfunding." CESifo DICE Report **14**(2): 16-22.

Hornuf, L., and A. Schwienbacher (2017). "Should securities regulation promote equity crowdfunding?" Small Business Economics **49**(3): 579-593.

Hornuf, L., and A. Schwienbacher (2018). "Market mechanisms and funding dynamics in equity crowdfunding." Journal of Corporate Finance **50**: 556-574.

Hsieh, H.-C. et al. (2019). "How social movements influence crowdfunding success." Pacific-Basin Finance Journal **53**: 308-320.

Ibrahim, D. M. (2017). "Crowdfunding without the Crowd." North Carolina Law Review **95**(1): 1481-1506.

Indiegogo (2018). "Indiegogo Statistics." Retrieved 10/25/2018, from https://entrepreneur.indiegogo.com/how-it-works/.

James, T. G. (2013). "Far from the Maddening Crowd: Does the Jobs Act Provide Meaningful Redress to Small Investors for Securities Fraud in Connection with Crowdfunding Offerings." Boston College Law Review **54**(4): 1767-1802.

Jegelevičiūtė, S., and L. Valančienė (2015). "Comparative Analysis of the Ways Crowdfunding is Promoted." Procedia - Social and Behavioral Sciences **213**: 268-274.

Jih, W.-J. K., et al. (2007). "Effects of Service Quality and Shared Value on Trust And Commitment: An Empirical Study of 3Cs Product Customers in Taiwan." International Journal of Business Studies **15**(2): 83-98.

Johnson, C. D. (2013). Social Capital: Theory, Measurement, and Outcomes. New York, Nova Science Publishers, Inc.

Joshi, M. K. (2018). "Crowdfunding For Startups in India." Aweshkar Research Journal **24**(1): 37-48.

Kaplan, S. N., et al. (2009). "Should Investors Bet on the Jockey or the Horse? Evidence from the Evolution of Firms from Early Business Plans to Public Companies." The Journal of Finance **64**(1): 75-115.

Kaplan, S. N., and P. Strömberg. (2004). "Characteristics, Contracts, and Actions: Evidence from Venture Capitalist Analyses." The Journal of Finance **59**(5): 2177-2210.

Kerr, W. R., et al. (2014). "The Consequences of Entrepreneurial Finance: Evidence from Angel Financings." Review of Financial Studies **27**(1): 20-55.

Kickstarter (2018). "Kickstarter Statistics." Retrieved 10/1/2018, 2018, from https://www.kickstarter.com/help/stats

Kim, K., and I.-H. Hann (2019). "Crowdfunding and the Democratization of Access to Capital—An Illusion? Evidence from Housing Prices." Information Systems Research **30**(1): 276-290.

Kogan, L. et al. (2017). "Technological Innovation, Resource Allocation, and Growth*." The Quarterly Journal of Economics **132**(2): 665-712.

Kogut, B., and U. Zander (1992). "Knowledge of the firm, combinative capabilities, and the replication of technology." Organization Science **3**(3): 383–397.

Koh, J., and Y. G. Kim (2004). "Knowledge sharing in virtual communities: an e-business perspective." Expert Systems with Applications **26**(2): 155-166.

Koppel, J. G. S. (1999). "The Challenge of Administration by Regulation: Preliminary Findings regarding the U. S. Government's Venture Capital Funds." Journal of Public Administration Research and Theory **9**(4): 641-666.

Korteweg, A. and M. Sorensen (2010). "Risk and Return Characteristics of Venture Capital-Backed Entrepreneurial Companies." Review of Financial Studies **23**(10): 3738-3772.

Kromidha, E., and P. Robson (2016). "Social identity and signalling success factors in online crowdfunding." Entrepreneurship & Regional Development **28**(9-10): 605-629.

Kshetri, N. (2015). "Success of Crowd-based Online Technology in Fundraising: An Institutional Perspective." Journal of International Management **21**(2): 100-116.

Kshetri, N. (2018). "Informal Institutions and Internet-based Equity Crowdfunding." Journal of International Management **24**(1): 33-51.

Kuppuswamy, V. and B. L. Bayus (2017). "Does my contribution to your crowdfunding project matter?" Journal of Business Venturing **32**(1): 72-89.

Lagazio, C., and F. Querci (2018). "Exploring the multi-sided nature of crowdfunding campaign success." Journal of Business Research **90**: 318-324.

Laurell, C. et al. (2018). "Assessing the interplay between crowdfunding and sustainability in social media." Technological Forecasting and Social Change.

Lehner, O. M. (2014). "The formation and interplay of social capital in crowdfunded social ventures." Entrepreneurship & Regional Development **26**(5-6): 478-499.

Leone, D., and F. Schiavone (2018). "Innovation and knowledge sharing in crowdfunding: how social dynamics affect project success." Technology Analysis & Strategic Management, **31**(7): 803-816.

Leyden, D. P., et al. (2014). "A theoretical analysis of the role of social networks in entrepreneurship." Research Policy **43**(7): 1157-1163.

Li, D. et al. (2006). "An Empirical Investigation of Web Site Use Using a Commitment-Based Model." Decision Sciences **37**(3): 427-444.

Li, T. (2013). "Fraud in crowdfunding and antifraud insurance." The George Washington University Law School, available at http://works.bepress.com/timothy_li/2.

Liang, T.-P. et al. (2018). "Why funders invest in crowdfunding projects: Role of trust from the dual-process perspective." Information & Management.

Lin, M. et al. (2013). "Judging Borrowers by the Company They Keep Friendship Networks and Information Asymmetry in Online Peer-to-Peer Lending." Management Science **59**(1): 17-35.

Lin, M., and S. Viswanathan (2016). "Home Bias in Online Investments: An Empirical Study of an Online Crowdfunding Market." Management Science **62**(5): 1393-1414.

Liu, H., and Y. Wang (2018). "The Value of Crowdfunding: An Explanation Based on Demand Uncertainty and Comparison with Venture Capital." Emerging Markets Finance and Trade **54**(4): 783-791.

Liu, M. M. (2015). Angels Without Borders: Trends And Policies Shaping Angel Investment Worldwide. New Jersey, World Scientific.

Long, J. S. (1983). Confirmatory factor analysis: a preface to LISREL. Beverly Hills, Sage Publications.

Lukkarinen, A. et al. (2016). "Success drivers of online equity crowdfunding campaigns." Decision Support Systems **87**: 26-38.

M., W. A. (2019). "The Tax Implications of Crowdfunding: From Income to Deductions." North Carolina Law Review **97**(3): 710-733.

Maeda, A. (2008). "Optimal Lottery Design for Public Financing." The Economic Journal **118**(532): 1698-1718.

Mamonov, S., and R. Malaga (2019). "Success factors in Title II equity crowdfunding in the United States." Venture Capital **21**(2-3): 223-241.

Mamonov, S., and R. Malaga (2020). "A 2020 perspective on "Success factors in Title III equity crowdfunding in the United States." Electronic Commerce Research and Applications **40**: 100933.

Masona, C. M., and R. T. Harrisonb (2002). "Is it worth it? The rates of return from informal venture capital investments." Journal of Business Venturing(17): 211–236.

Mathiassen, L. (2017). "Designing Engaged Scholarship: From Real-World Problems to Research Publications." Engaged Management ReView **1**(1).

Matusik, S. F., et al. (2008). "Values and judgment under uncertainty: Evidence from venture capitalist assessments of founders." Strategic Entrepreneurship Journal **2**(2): 95–115.

Maxwell, A. L., and M. Lévesque (2014). "Trustworthiness: A Critical Ingredient for Entrepreneurs Seeking Investors." Entrepreneurship Theory and Practice **38**(5): 1057-1080.

Messeni Petruzzelli, A., et al. (2019). "Understanding the crowdfunding phenomenon and its implications for sustainability." Technological Forecasting and Social Change 141: 138-148.

McDonald, M. B., and R. P. DeGennaro (2016). "A review of angel investing research: analysis of data and returns in the US and abroad." Studies in Economics and Finance **33**(4): 716-734.

Medina-Molina, C. et al. (2019). "Participation in crowdfunding among users of collaborative platforms: the role of innovativeness and social capital." Review of Managerial Science **13**(3): 529-543.

Meer, J. (2014). "Effects of the price of charitable giving: Evidence from an online crowdfunding platform." Journal of Economic Behavior & Organization **103**: 113-124.

Metrejean, C. T., and B. A. McKay (2018). "Donation-based crowdfunding and nontaxable gifts." Journal of Accountancy **225**(3): 34-39.

Mills, K. G., and B. McCarthy (2014). The state of small business lending: credit access during the recovery and how technology may change the game. Cambridge, MA, Harvard Business School. **15-004**.

Mitteness, C. R. et al. (2012). "Horse vs. Jockey? How the stage of the funding process and industry experience affect the evaluations of angel investors." Venture Capital **14**(4): 241-267.

Mollick, E. (2014). "The dynamics of crowdfunding: An exploratory study." Journal of Business Venturing **29**(1): 1-16.

Mollick, E. (2015). Delivery Rates on Kickstarter, Available at SSRN: https://ssrn.com/abstract=2699251 or http://dx.doi.org/10.2139/ssrn.2699251.

Mollick, E., and A. Robb (2016). "Democratizing Innovation and Capital Access: The Role Of Crowdfunding." The University of California, Berkley **58**(2): 72-87.

Moran, P. (2005). "Structural vs. relational embeddedness: social capital and managerial performance." Strategic Management Journal **26**(12): 1129-1151.

Morgan, R. M., and S. D. Hunt (1994). "The Commitment-Trust Theory of Relationship Marketing." Journal of Marketing **58**(1): 20-38.

Mwencha, P. M., and S. M. Muathe (2019). "A principal component analysis of customers' perceived risks for online retailing services: Evidence from Kenya." Journal of Customer Behaviour **18**(3): 167-214.

Nahapiet, J. (1998). "Social Capital, Intellectual Capital, and the organizational advantage." Academy ol Management Review **23**(2): 242-266.

Nahapiet, J. and S. Ghosal (1998). "Social Capital, Intellectual Capital, and the Organizational Advantage." Academy of Management Review **23**(2): 242-266.

Nahata, R. (2008). "Venture capital reputation and investment performance☆." Journal of Financial Economics **90**(2): 127-151.

Nielsen, J., et al. (2017). "The ABCs of private equity and venture capital data and information." Journal of Business & Finance Librarianship **22**(3-4): 231-238.

NSBA (2017). "Year-End-Economic-Report-2017." Retrieved 2/13/2020, 2020, from https://nsba.biz/wp-content/uploads/2018/02/Year-End-Economic-Report-2017.pdf.

Ordanini, A. et al. (2011). "Crowd-funding: transforming customers into investors through innovative service platforms." Journal of Service Management **22**(4): 443-470.

Paulet, E., and F. Relano (2017). "Exploring the Determinants of Crowdfunding: The Influence of the Banking System." Strategic Change **26**(2): 175-191.

Pierce-Wright, C. H. (2016). "State Equity Crowdfunding And Investor Protection." Washington Law Review **91**(2): p847-886.

Polishchuk, V. et al. (2019). "Technology Improving Safety of Crowdfunding Platforms Functioning in the Context of the Protection of the Start-Up Investors in the Financial and Transport Sectors." Journal of KONBiN **49**(1): 313-330.

Prakash, K. B., and P. S. Reddy (2019). "Equity Crowdfunding in Europe - A New Financial Phenomenon for Gen-Z Entrepreneurs." International Journal of Business Insights & Transformation **12**(2): 3-7.

Report (2013). Crowdfunding's Potential for Developing World, infoDev, Finance, and Private Sector Development Department. Washington, DC: World Bank.

Roma, P., et al. (2017). "From the crowd to the market: The role of reward-based crowdfunding performance in attracting professional investors." Research Policy **46**(9): 1606-1628.

Romaní, G., et al. (2018). "Who wants to be an angel investor? The characteristics of the high net worth individuals in the Chilean resource periphery." Academia Revista Latinoamericana de Administración **31**(1): 136-155.

Rossi, A., and S. Vismara (2017). "What do crowdfunding platforms do? A comparison between investment-based platforms in Europe." Eurasian Business Review **8**(1): 93-118.

Ryu, S. (2018). "Crowdfunding as a two-sided platform: Development of a Crowdfunding Participation Model. In Research Handbook of Finance and Sustainability. Cheltenham, UK: Edward Elgar Publishing. Doi: https://doi.org/10.4337/9781786432636.00039. Available at SSRN: https://ssrn.com/abstract=2423315 or http://dx.doi.org/10.2139/ssrn.2423315."

Sauermann, H. et al. (2019). "Crowdfunding scientific research: Descriptive Insights and Correlates of funding success." PLoS ONE **14**(1): 1-26.

Saxton, G. D., and C. Guo (2014). "Online stakeholder targeting and the acquisition of social media capital." International Journal of Nonprofit and Voluntary Sector Marketing **19**(4): 286-300.

Saxton, G. D., and C. Guo (2020). "Social media capital: Conceptualizing the nature, acquisition, and expenditure of social media-based organizational resources." International Journal of Accounting Information Systems: 100443.

Schoorman, D. F. (2007). "An Integrative Model of Organizational Trust: Past, Present, and Future." Academy of Management Review **32**(2): 344–354.

Shane, S., and D. Cable (2002). "Network Ties, Reputation, and the Financing of New Ventures." Management Science **48**(3): 364-381.

Shane, S. A. (2009). Title: Fool's Gold? : The Truth Behind Angel Investing in America. New York, NY, Oxford University Press.

Shepherd, D. A. (2015). "Party On! A call for entrepreneurship research that is more interactive, activity based, cognitively hot, compassionate, and prosocial." Journal of Business Venturing **30**(4): 489-507.

Siering, M., et al. (2016). "Detecting Fraudulent Behavior on Crowdfunding Platforms: The Role of Linguistic and Content-Based Cues in Static and Dynamic Contexts." Journal of Management Information Systems **33**(2): 421-455.

Skirnevskiy, V. et al. (2017). "The Influence of Internal Social Capital on Serial Creators' Success in Crowdfunding." Entrepreneurship Theory and Practice **41**(2): 209-236.

Sohl, J. E. (2003). "The US Angel and Venture Capital Market: Recent Trends and Developments." Journal of Private Equity **6**(2): 7-17.

Sohn, H. G. (2016). "The determinants of successful Angel investors." Martin School of Public and Administration, University of Kentucky.

Stanko, M. A., and D. H. Henard (2017). "Toward a better understanding of crowdfunding, openness, and the consequences for innovation." Research Policy **46**(4): 784-798.

Steinberg, D. (2012). "KICKSTARTER Handbook: Real-Life Crowdfunding Success Stories." Library Journal **137**(17): 85-85.

Stevenson, R. M., et al. (2018). "Unleashing main street entrepreneurship: Crowdfunding, venture capital, and the democratization of new venture investments." Small Business Economics **52**(2): 375-393.

Strohmaier, D. et al. (2019). "Trust, distrust, and crowdfunding: A study on perceptions of institutional mechanisms." Telematics and Informatics **43**: 101252.

Sudek, R. et al. (2008). "Betting on the Horse or the Jockey: The Impact of Expertise on Angel Investing." Academy of Management Best Paper Proceedings **2008**(1): 1-6.

Swanson, E. et al. (2020). "The effect of leader competencies on knowledge sharing and job performance: Social capital theory." Journal of Hospitality and Tourism Management **42**: 88-96.

Tamjidyamcholo, A. et al. (2013). "Information security – Professional perceptions of knowledge-sharing intention under self-efficacy, trust, reciprocity, and shared language." Computers & Education **68**: 223-232.

Tibbets, S. D. (2012). "Federal Lawyer New SBA Regulation Would Encourage Venture Capital Investment in SBIR Grant Applicants - Or Would It." Federal Lawyer **59**(9): 36-38.

Timmins, R. et al. (2019). 2019 ACA Angel Funders Report, Angel Capital Association. URL: https://www.angelcapitalassociation.org/angel-funders-report/.

Ting, H. (2011). "The Effects of Goal Distance and Value in Escalation of Commitment." Current Psychology **30**(1): 93-104.

USBA (2018). "Small Business Profile." Retrieved 2/13/2020, 2020, from https://www.sba.gov/sites/default/files/advocacy/2018-Small-Business-Profiles-US.pdf.

Vanacker, T. R., and S. Manigart (2010). "Pecking order and debt capacity considerations for high-growth companies seeking financing." Small Business Economics **35**(1): 53-69.

Vismara, S. (2016). "Equity retention and social network theory in equity crowdfunding." Small Business Economics **46**(4): 579-590.

Vismara, S. (2018). "Information Cascades among Investors in Equity Crowdfunding." Entrepreneurship Theory and Practice **42**(3): 467-497.

Vulkan, N., et al. (2016). "Equity crowdfunding: A new phenomenon." Journal of Business Venturing Insights **5**: 37-49.

Walthoff-Borm, X. et al. (2018). "Equity crowdfunding, shareholder structures, and firm performance." Corporate Governance: An International Review **26**(5): 314-330.

Wang, T. et al. (2018). "Exploring the determinants of fundraisers' voluntary information disclosure on crowdfunding platforms." Online Information Review **42**(3): 324-342.

Wang, W.-T. et al. (2016). "The stickiness intention of group-buying websites: The integration of the commitment–trust theory and e-commerce success model." Information & Management **53**(5): 625-642.

Wefunder (2018). "Wefunder statistics." Retrieved 10/25/2018, from https://wefunder.com/stats/all.

Wehnert, P., et al. (2019). "In crowdfunding, we trust? Investigating crowdfunding success as a signal for enhancing trust in sustainable product features." Technological Forecasting and Social Change **141**: 128-137.

Wei, C.-L. et al. (2019). Factors that Influence Sharing Behaviors in Sharing Economy Based on the Theory of Social Capital and Social Exchange: Example of Taiwan-Based USPACE. 2019 IEEE International Conference on Industrial Engineering and Engineering Management (IEEM). Macao, China. **659-663**.

Weinstein, R. S. (2013). "Crowdfunding in the U.S. and Abroad: What to Expect When You're Expecting." Cornell International Law Journal **46**(2): 427-453.

Wells, N. (2013). "The Risks of Crowdfunding." Risk Management **60**(2): 26-29.

Wessel, M., et al. (2016). "The emergence and effects of fake social information: Evidence from crowdfunding." Decision Support Systems **90**: 75-85.

Wille, D. et al. (2017). "Small-business financing after the financial crisis – lessons from the literature." Journal of Entrepreneurship and Public Policy **6**(3): 315-339.

Won, J. (2018). "JUMPSTART REGULATION CROWDFUNDING: WHAT IS WRONG AND HOW TO FIX IT." Lewis & Clark Law Review **22**(4): 1393-1429.

WSAGO (2014). "Attorney General Files Lawsuit Against Company Behind Asylum Playing Cards Crowdfunded Project." from https://www.atg.wa.gov/news/news-releases/attorney-general-files-lawsuit-against-company-behind-asylum-playing-cards.

Wu, S. et al. (2019). "The Influence of Fake Reviews on Consumer Perceptions of Risks and Purchase Intentions." Journal of Marketing Development and Competitiveness **13**(3): 133-143.

Yao, C.-Y. et al. (2014). "Understanding social capital, team learning, members' e-loyalty, and knowledge sharing in virtual communities." Total Quality Management & Business Excellence **26**(5-6): 619-631.

Young, M. J., and E. Scheinberg (2017). "The Rise of Crowdfunding for Medical Care: Promises and Perils." JAMA **317**(16): 1623-1624.

Yung, C. (2009). "Entrepreneurial Financing and Costly Due Diligence." Financial Review, **44**.

Zhao, Q. et al. (2017). "Determinants of backers' funding intention in crowdfunding: Social exchange theory and regulatory focus." Telematics and Informatics **34**(1): 370-384.

Zhang, H., and W. Chen (2019). "Backer Motivation in Crowdfunding New Product Ideas: Is It about You or Is It about Me?" Journal of Product Innovation Management 36(2): 241-262.

Zheng, H., et al. (2014). "The role of multidimensional social capital in crowdfunding: A comparative study in China and the US." Information & Management **51**(4): 488-496.

Ziegler, T. et al. (2017). The Americas Alternative FInance Report 2017, Cambridge Center For Alternate Finance, University of Cambridge, Polsky Center for Entrepreneurship and Innovation, Chicago Booth School of Business, University of Chicago.

VITA

BABU V. MANIKANDAN

9904 Dew Cv • Cordova, Tennessee 38016 • babu.manikandan@yahoo.com

Biography

Innovative Technology Program Manager and Director of Information Technology Services with 20+ years of consulting management experience leading highly complex projects for top Fortune 500 corporations. Experienced in and setting up offshore development centers (India/Philippines) and reducing overhead costs (Facilities and Administration) for prospective clients. Demonstrated strengths initiating, planning, executing, controlling, and delivering large scale software implementation projects on time and on budget.

Qualifications

- Executive Doctorate in Business (EDB) (Expected Graduation - 2020), Georgia State University, Atlanta, GA
- Master of Business Administration in Global Business Management (MBA) (2010), Duke University, Durham, North Carolina
- Bachelor of Science in Computer Information Systems (2008), Strayer University, Washington, DC
- Diploma in Computer Science and Engineering (1991), AVC Polytechnic College, Tamilnadu, India

Certifications

- Higher Education Teaching Certificate (2019), Harvard University, The Derek Bok Center for Teaching and Learning

Interests and Future Plans

My interest and passion are to pursue a career in higher education teaching. When I decided to pursue doctoral degree at Georgia State University because of having strong passion for teaching. My previous teaching experiences are limited to teaching young workforce for my company develop problem solving skills in Information Systems. I believe that teaching should be an interactive experience that not only encourage a positive learning environment but also enable students as independent thinkers. Also, to strengthen my qualifications my immediate short-term plan is getting my research paper published in a leading journal. My long-term goal is to blend my professional Information Technology experience with the research skills gained in my future research studies.