

**The Effects of Founders' Competence, Integrity, and Demographic Characteristics
on Equity-based Crowdfunders' Investment Decision**

by

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ABSTRACT

Scholars are increasingly exploring crowdfunding, a novel and rapidly growing source of new venture financing. A key part of this research has sought to explain what factors are important to the crowdfunding investment decision. In this dissertation, I seek to contribute to research concerning investor decision-making by exploring how a founder's communication of reasons for investors to trust them influences equity-based crowdfunders' investment likelihood. Specifically, I consider the research question: "Do founders' assertions about their competence and integrity persuade crowdfunders to contribute capital to their venture in exchange for equity?" I also incorporate founders' demographic characteristics as boundary conditions that may influence whether investors develop competence- and integrity-based trust with founders. I test my ideas through the use of policy capturing, a methodology that provides an internally valid test of how investors are making decisions about the ventures in which they invest. Results provide evidence that founders' assertions about their trustworthiness have a positive influence on investment likelihood. Additionally, under certain circumstances, shared demographic characteristics between founders and investors serve as boundary conditions that influence whether founders' communication of their trustworthiness will affect investment decisions.

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CHAPTER 1: INTRODUCTION

Crowdfunding has become an important alternative source of seed funding for entrepreneurs and their ventures in recent years. Crowdfunding is an internet-based system that allows founders of commercial, cultural, or social projects to request funding from many individuals, often in return for a reward, repayment with interest, or equity (Mollick, 2014). Contrasted with traditional forms of early-stage venture financing (e.g. venture capital, angel investment, debt) that allow one or a few accredited investors to make a large investment, crowdfunding involves many small contributions from a large number of unaccredited individuals. This novel financing medium has achieved impressive growth. According to a recent report, annual crowdfunding investments overtook venture capital as the largest source of investment capital for new ventures during 2015 with \$34 billion invested worldwide (Massolution, 2016). This research also shows that the crowdfunding industry has at least doubled in size each year since 2010. A portion of this growth is due to the recent introduction of equity-based crowdfunding, which involves funding commercial ventures with many small investments from a large number unaccredited investors in exchange for equity in the venture (Ahlers, Cumming, Günther, & Schweizer, 2015). The ability to offer equity to unaccredited investors in exchange for capital has increased the appeal of crowdfunding to many entrepreneurs and investors, but it has also raised important questions about how entrepreneurs can best attract those investors and how those investors are making decisions about investing (Bruton, Khavul, Siegel, & Wright, 2015).

Prior research on predicting the likelihood that a venture will secure funding has focused on the decision-making criteria of investors and lenders (Drover, Busenitz, Matusik, Townsend, Anglin, & Dushnitsky, 2017). Though these studies have generated important insights, their findings do not generalize to commercial, equity-based crowdfunding for two important reasons: (a) the studies largely examine accredited investors and lenders (Cassar, 2004) or (b) they use crowdfunding samples that include both investors in commercial projects and prosocial funders of social or cultural projects (Short, Ketchen, McKenney, Allison, & Ireland, 2017). In addition, these studies utilize data sources that make it difficult to control for external sources of variance and thus, alternative explanations for their findings (McKenney, Allison, Ketchen, Short, & Ireland, 2017). Researchers have not widely utilized experimental methods to examine specific decision-making criteria of unaccredited investors as they consider investing in a commercial venture through a crowdfunding medium. This is an important area of research for management and entrepreneurship scholars because entrepreneurs must understand how to manage their venture to attract this unique and increasingly relevant class of investors.

I extend this line of study by examining how a founder's ability to communicate reasons for investors to trust them influences investment likelihood. Specifically, in this dissertation I consider the research question: "Do founders' assertions about their competence and integrity persuade crowdfunders to contribute capital to their venture in exchange for equity?" Competence- and integrity-based trust are two fundamental and distinct types of trust that investors may develop with entrepreneurs when making an investment decision (Connelly, Ketchen, Gangloff, & Shook, 2015). Thus, I examine

how competence-based trust and integrity-based trust influence a founder's likelihood of receiving an investment. Further, I test the relative impact of each type of trust. This test provides insight about whether a founder's competence or integrity is more important for high-risk and unaccredited investors.

I also incorporate founders' demographic characteristics as boundary conditions that may influence how investors interpret a founder's communications of their trustworthiness. I believe crowdfunders may be especially susceptible to interpersonal biases and stereotypes related to a founder's demographic characteristics when making investment decisions. This is because, unlike accredited investors, unaccredited investors have little or no investing experience and investment training to guide their decision-making. I focus on founders' sex and race because they are conspicuous characteristics that are visible in the portrait-style image of themselves that platforms require founders to provide for their campaign. Moreover, substantial empirical evidence shows that individuals hold and act on biases related to sex and race in various other decision-making settings (Pearce & Xu, 2012; Smith, McPherson, & Smith-Lovin, 2014).

I test these ideas using a policy capturing methodology. Policy capturing, a technique derived from social judgment theory, is useful for examining decision processes in which the researcher varies levels of critical attributes and combines them to create hypothetical situations (Aiman-Smith, Scullen, and Barr, 2002; Hitt, Ahlstrom, Dacin, Levitas, & Svoboda, 2004). This technique allows me to decompose the underlying structure of investors' decisions through hierarchical linear modeling (HLM) (Hitt, Dacin, Levitas, Arregle, & Borza, 2000). I chose this methodology because it minimizes the effects of cognitive biases associated with self-reports, allows me to assess

the reliability of decisions, and controls for external sources of variance and alternative explanations (Connelly, Miller & Devers, 2012). Further, research shows that this methodology reliably reflects actual decisions in field settings (Olson, Dell’Omo, & Jarley, 1992; Wiseman & Levin, 1996).

This dissertation contributes to the management and entrepreneurship literatures in three important ways. First, I contribute to theory about investor decision-making in a crowdfunding environment (Ding, Au, & Chiang, 2015; Harrison, Dibben, & Mason, 1997) by incorporating emerging research on trust into their decision-making criteria. Founder trustworthiness is an essential component of the investment decision for crowdfunders because they cannot easily monitor the founder’s actions to ensure s/he is making strategically sound and ethical choices. Emerging research on trust in organizational settings indicates that separate dimensions of trust arise from an individual’s competence (i.e., technical knowledge and skills) and integrity (i.e., motives, honesty and character) (Connelly, Crook, Combs, Ketchen, & Aguinis, 2018; Ferrin, Kim, Cooper, & Dirks, 2007). Thus, as crowdfunders screen of potential investments, they likely assess a founder’s competence and integrity to determine whether they can trust that founder to act in their best interest. However, demonstrating their trustworthiness may be particularly challenging for founders in a crowdfunding setting because platforms limit their preinvestment communication and socialization with potential investors (Ahlers et al., 2015). As a result, founders must convince investors of their competence and integrity in the limited amount of information they provide on the campaign page. Therefore, while trust represents an important component of the

investment decision for equity-based crowdfunders, it is uniquely difficult for founders to convince potential investors of their trustworthiness in a crowdfunding setting.

Second, I complement the body of extant empirical research on crowdfunding by utilizing a methodology that provides an internally valid test of how investors are making decisions about the ventures in which they invest. Prior studies on crowdfunder decision-making have utilized archival or self-report data sources that offer external validation, but little internal validation or experimental control (Cholakova & Clarysse, 2015; Mollick, 2014; Skirnevkiy, Bendig, & Brettel, 2017). Policy capturing allows me to manipulate the variables of interest and provides robust control of all other potential factors. Thus, I can have greater confidence than I could with self-report or archival data that the study's findings are valid and not confounded by an outside source of variance. As a result, this study provides additional support for theory about the role of trustworthiness, stereotypes, and biases in the decision-making processes of investors.

Third, I also add to research on trust by theorizing about how stereotypes and biases related to sex and race influence investors' development of competence- and integrity-based trust with founders. Drawing on social identity theory, I argue that shared demographic characteristics between investors and founders can affect how investors interpret founders' claims of trustworthiness. Notably, crowdfunders may be more susceptible to interpersonal biases and stereotypes than other types of early-stage investors. This is because unaccredited investors are likely inexperienced and untrained and, therefore, may not systematically screen investment opportunities based on objective criteria. Thus, I examine how conspicuous characteristics that are visible in the portrait-

style image of founders that appears in their campaign influence the relationship between trust and investment likelihood.

This dissertation unfolds in four parts. The first is a literature review that lays the groundwork for theory building. It begins with a review of the limited literature on crowdfunding and then expands to the broader literature on the predictors of early-stage investment. This research shows that investors generally prefer trustworthy and able founders with whom they share similarities. Thus, I follow with a deeper analysis and review of two additional literatures that align with those investor preferences: trust formation and social identity.

In the second section, I develop hypotheses that build on the findings from the literature review. I provide specific claims about how founder communications of their competence and integrity might influence their likelihood of receiving an investment. I also provide arguments about the relative influence of competence- versus integrity-based trust on investment likelihood. I then offer boundary conditions related to founders' demographic characteristics that may affect how potential investors interpret founders' claims of competence and integrity.

The third section describes the method I use to test these hypotheses. I describe the study's policy capturing design in detail. I then specify the number and type of respondents that participated in the study. I also illustrate how I manipulated each of the predictor variables, how I measured investment likelihood, and which additional control variables I incorporated within the analysis. Lastly, I describe the analysis technique I utilized to evaluate the data and report the results of the analysis.

This study could have implications for scholars and entrepreneurs, so the dissertation ends with a discussion of the results. I discuss how the results add to the field's current knowledge of crowdfunding and investor decision-making. I also discuss practical implications for founders considering how best to raise early-stage capital through an equity-based crowdfunding medium.

CHAPTER 2: LITERATURE REVIEW

This chapter reviews the current literature supporting this dissertation. I begin by reviewing research on crowdfunding and examining events that have shaped the landscape in this novel venture-financing environment. I discuss the current, but rapidly changing types of crowdfunding platforms (i.e., reward-, debt-, and equity-based) to clarify this discussion. Due to the limited amount of current crowdfunding research, I also review the rich area of research on factors that influence traditional investors (i.e., venture capitalists, angels, and small business lenders) to invest in early stage ventures. The investor decision-making literature shows that three themes of entrepreneurs' characteristics influence investment likelihood: trustworthiness and similarities to the potential investors. In line with these themes, I review two other literatures.

First, I review research on trust and its role in investor decision-making. In doing so, I review research on trust formation between previously unacquainted individuals and its effect on perceived attractiveness of an investment opportunity. This research shows that individuals form initial trusting beliefs about others' competence and integrity when considering their trustworthiness. Therefore, I review research on competence- and integrity-based trust formation and their effect on investment attractiveness.

Second, I review research concerning in-group, out-group bias related to sex and race similarity through the lens of social identity theory. The research in this area shows that individuals tend to favor others with whom they share similarities. This tendency

extends to early stages of acquaintance such that individuals are attracted to others who share superficial similarities such as sex and race. Therefore, I review research on ingroup, out-group bias and social identity to develop hypotheses about how entrepreneurs' sex and race influence investors' venture funding decisions.

Crowdfunding

Crowdfunding has become an important alternative source of seed funding for entrepreneurs in recent years. According to a recent report, annual crowdfunding investments overtook venture capital investments during 2015 with \$34 billion and \$30 billion invested in new ventures, respectively (Massolution, 2016). Existing evidence also shows impressive growth in the volume of capital collected through crowdfunding efforts worldwide (Mollick, 2014). Research shows that the crowdfunding industry has at least doubled in size each year since 2010 (Massolution, 2016). With such mass availability of capital and continued growth, it is not surprising that entrepreneurs increasingly utilize crowdfunding to fund their ventures (Bruton, Khavul, Siegel, & Wright, 2015).

Crowdfunding is an internet-based system that allows founders of commercial, cultural, or social projects to request funding from many individuals, often in return for a reward or equity in the project (Mollick, 2014). Contrasted with traditional forms of early-stage venture financing (e.g. venture capital, angel investment, debt) that allow one or a few accredited investors to make a large investment, crowdfunding involves many small contributions from a large number of unaccredited individuals. Taken together, these unaccredited individuals represent the crowd. In the crowdfunding setting three parties exist, a *founder* of project creates a campaign page on an internet-based *platform* to petition the *crowd* for monetary contributions that will finance their project. Platforms

serve as an intermediary between founders and the crowd by advertising the project's campaign, collecting monetary contributions for the project, and distributing those contributions once the campaign has ended. Thus, crowdfunding also differs from traditional forms of investment in that crowdfunding involves an intermediary between founders and investors. Differences also exist among the various types or models of crowdfunding. Three types or models of crowdfunding exist today: reward-based, debt-based, and equity-based (Allison, McKenney, & Short, 2013; Belleflamme, Lambert, & Schweinbacher, 2014). I provide a summary of the research on each of these three types of crowdfunding in Table I.

The first and most studied crowdfunding model, *reward-based crowdfunding*, involves offering a token reward for contributions or preselling products and services when raising funds for their ventures. Reward-based projects incentivize contributors via acknowledgments, social access to or communication with the founder, and pre-market releases of the project's product or service (Mollick, 2014). Reward-based platforms include websites such as Kickstarter (www.kickstarter.com) and IndieGoGo (www.indiegogo.com). These platforms have experienced tremendous success with Kickstarter raising over \$ for # projects since its inception and one project raising over \$10 million for the production of a smart watch (Mollick, 2014).

Table I
Review of Selected Management Studies on Crowdfunding

Year	Author(s) Journal	Theoretical Foundation(s)	Data Source	Type of Crowd- funding	Sample	Key Findings
2018	Kuppuswamy & Bayus, <i>JBV</i>	Diffusion of responsibility theory	Archival	Reward	25,050 Kickstarter projects	Backer support for a crowdfunded project will increase as the project nears its target goal
2017	Davis, Hmieleski, Webb, & Coombs, <i>JBV</i>	Affective events theory	Survey	Reward	102 participants assessing 10 product pitches	Perceptions of product creativity positively influence crowdfunding performance through positive affective responses among potential backers
2017	Greenberg & Mollick <i>ASQ</i>	Social identity theory	Survey Archival	Reward	399 students surveyed and 1,250 Kickstarter projects	Women are more likely to fund women owned businesses in a crowdfunding context due to perceptions of shared structural barriers stemming from a common social identity based on gender-group membership
2017	Parhankagas & Renko, <i>JBV</i>	Language expectancy theory	Archival	Reward	656 Kickstarter projects	Linguistic styles that make the campaign or their founder more understandable and relatable to the crowd boost funding for social campaigns but not commercial campaigns
2016	Calic & Mosakowski, <i>JMS</i>	Institutional theory	Archival	Reward	87,261 Kickstarter projects	A sustainability orientation positively affects funding success of crowdfunding projects mediated by project creativity and third party endorsements
2016	Paravisini, Rappoport, & Ravina, <i>MS</i>	Prospect theory	Archival	Debt	50,254 peer-to-peer loans on Lending Club	Wealthier lenders are more risk averse in general and all lenders become more risk averse after economic downturns
2016	Wei & Lin, <i>MS</i>	Game theory	Archival	Debt	13,017 peer-to-peer lending campaigns on Prosper	Campaigns using a posted pricing method are more likely to receive funding but also more likely to default after receiving a loan than those using an auction format
2015	Ahlers, Cumming, Gunther, & Schweizer, <i>ET&P</i>	Signaling theory	Archival	Equity	104 equity crowdfunding campaigns in Australia	Founders that retain equity and provide detailed financial information about their venture to reduce uncertainty for potential investors are more likely to receive funding Signals of social and intellectual capital do not influence likelihood of funding in an equity crowdfunding context
2015	Bruton, Khavul, Siegel, & Wright, <i>ET&P</i>	Institutional theory	Conceptual	Reward, debt, and equity		Entrepreneurial finance is evolving because new financing alternatives, such as microfinance, crowdfunding, and peer-to-peer lending, have expanded rapidly

Table I, continued.

Year	Author(s) Journal	Theoretical Foundation(s)	Data Source	Type of Crowd- funding	Sample	Key Findings
2015	Burch, Ghose, Wattal, <i>MS</i>	Institutional theory	Experiment	Reward	128,701 potential crowdfunders	A platform's reduction of privacy controls for crowdfunders increases the likelihood of funding but decreases the average contribution for a small net increase in fund raising
2015	Cholakova & Clarysse, <i>ET&P</i>	Cognitive evaluation theory	Survey	Equity	155 registered equity crowdfunders	Financial returns provide greater motivation to invest among equity crowdfunders than do social benefits
2015	Lin & Viswanathan, <i>MS</i>	Social identity theory	Archival	Debt	3,540 lending bids on Prosper	A home bias, or a tendency for a party to invest in the same geographical area, exists among lenders on peer-to-peer lending sites
2015	Iyer, Khwaja, Luttmer, & Shue, <i>MS</i>	Investment screening theory	Archival	Debt	194,033 Prosper loan profiles	Peer lenders are more accurate in predicting an individual's likelihood of defaulting on a loan than models using borrowers' credit score Peer lenders also demonstrated 87% of the predictive power of an econometrician incorporating standard financial borrower information
2015	Moss, Neubaum, & Meyskens, <i>ET&P</i>	Signaling theory	Archival	Debt	400,000 Kiva loan profiles	Ventures that signal dimensions of entrepreneurial orientation including autonomy, competitive aggressiveness, and risk-taking are more likely to receive funding
2015	Mollick & Nanda, <i>MS</i>	Crowd decision- making theory	Survey	Reward	180 expert evaluations of Kickstarter projects	There is significant agreement between the funding decisions of crowds and experts with crowds being more likely to fund campaigns
2014	Allison, Davis, Short, & Webb, <i>ET&P</i>	Cognitive evaluation theory	Archival	Debt	36,000 Kiva loan profiles	Lenders respond positively to narratives highlighting the venture as an opportunity to help others, and less positively when the narrative is framed as a business opportunity
2014	Belleflamme, Lambert, & Schwienbacher, <i>JBV</i>	Signaling theory	Conceptual	Reward vs. equity		When considering crowdfunding, entrepreneurs prefer pre-ordering if the initial capital requirement is small compared to market potential and prefer profit-sharing otherwise
2014	Colombo, Franzoni, & Rossi-Lamastra, <i>ET&P</i>	Network theory	Archival	Reward	669 Kickstarter projects	Entrepreneurs with greater social capital within the crowdfunding community receive more funding
2014	Leung & Sharkey, <i>OS</i>	Organizational ecology	Archival	Debt	37,766 Prosper loan profiles	Perceptions that a campaign spans multiple categories results in a devaluation penalty by investors even when the profile does not explicitly identify that the campaign spans multiple categories

Table I, continued.

Year	Author(s) Journal	Theoretical Foundation(s)	Data Source	Type of Crowd- funding	Sample	Key Findings
2014	Mollick, <i>JBV</i>	Network theory Signaling theory	Archival	Reward	48,500 Kickstarter projects	Underlying project quality and personal networks are associated with successful funding
2013	Allison, McKenney, & Short, <i>JBV</i>	Political theory Warm glow theory	Archival	Debt	6,051 Kiva loan profiles	Narratives high in language indicating blame are funded more quickly than those indicating accomplishment
2013	Lin, Prabhala, & Viswanathan, <i>MS</i>	Signaling theory	Archival	Debt	56,584 Prosper loan profiles	Online friendships of borrowers serves as signals of credit quality
2012	Zhang & Liu, <i>MS</i>	Social comparison theory	Archival	Debt	49,693 Prosper loan profiles	Lenders engage in rational herding where they infer the creditworthiness of borrowers by observing peer lending decisions and use publicly observable borrower characteristics to moderate their inferences
2011	Sonenshein, Herzenstein, & Dholakia, <i>OBHDP</i>	Social accounts theory	Archival Experiment	Debt	512 Prosper loan profiles 307 undergraduates	Accounts facilitate economic exchanges between unacquainted transaction partners because of their role in increasing perceived trustworthiness, but accounts can negatively relate to loan performance

Research on reward-based crowdfunding has examined key antecedents that predict successful funding. In the earliest published crowdfunding study, Mollick (2014) found that personal networks of the founding entrepreneur, underlying project quality, and geographic location predict successful funding. Other studies also emphasize the importance of a strong network, showing that founders' social capital developed inside the crowdfunding community provides crucial early support for projects (Colombo, Franzoni, & Rossi-Lamastra, 2014). Moreover, this early support creates a self-reinforcing pattern whereby attention gained from early contributions catalyzes funding. Researchers have also explored the impact of geographic location further. Lin & Viswanathan (2015) found that a home bias exists in the crowdfunding market, whereby individuals prefer to contribute to crowdfunding campaigns in nearby geographical areas. Relatively recent research shows that other biases also influence crowdfunders. Greenberg and Mollick (2017) found that female entrepreneurs attract to female crowdfunders through mechanisms of homophily, or attraction to others that resemble oneself. As such, women fund female-owned projects significantly more than male-owned projects.

The second model, *debt-based crowdfunding*, allows entrepreneurs to borrow small amounts of money from a large number of individual lenders (Allison, Davis, Short, & Webb, 2015). In the case of small entrepreneurial ventures, especially in developing economies, individuals typically make small loans to other individuals, which represent peer-to-peer microlending (Allison, McKenney, & Short, 2013). In other cases, individuals make relatively larger business loans to entrepreneurial companies. Kiva (www.kiva.com) and Prosper (www.prosper.com) represent the most popular and

successful debt-based crowdfunding platforms. Both of which allow peer-to-peer microlending and business loans.

Researchers have also applied research attention to understanding the antecedents of successful debt-based crowdfunding. Multiple studies in this area have focused on language used in the narratives provided on the campaign page. Allison and coauthors (2013) examined entrepreneurs' use of political rhetoric within the campaigns' narrative. They found that funding occurs more rapidly for narratives with more language indicating blame and language indicating the necessity of an immediate response to a problem. Conversely, narratives using a greater variety of language (i.e., less repetition) accompanied by language that depicts the accomplishments and tenacity of the entrepreneur receive less funding. Another study examined extrinsic versus intrinsic cues within the narrative. This study found that lenders prefer narratives that highlight the venture as an opportunity to help others, and reject narratives that frame the venture simply as a business opportunity (Allison et al., 2015)

The third and newest type of crowdfunding, *equity-based crowdfunding*, involves exchanging small portions of equity in a venture for small investments by a large number of unaccredited investors. Websites such as AngelList (www.Angel.co) and SeedUps (www.seedups.com) currently function as equity-based crowdfunding platforms and IndieGoGo has indicated that it will begin offering equity in the near future. However, until recently the U.S. government has limited equity-based crowdfunding to accredited angel investors and venture capitalists. Before these recent developments, unaccredited investors were limited to reward- and debt-based crowdfunding models.

In 2012, the United States government passed the Jumpstart Our Business Startups (JOBS) Act, which dramatically changed the ways in which many companies could raise capital through equity-based crowdfunding (Stemler, 2013). Under the Securities Act of 1933 (Securities Act), companies had to comply with complex registration requirements before issuing equity to outside investors (Keller & Gehlmann, 1988). Yet, registration under the Securities Act was prohibitively expensive for most small businesses with fees typically ranging from \$300,000 to \$500,000 (Sjostrom, 2001). Article III of the JOBS Act, known as the Capital Raising Online While Deterring Fraud and Unethical Non-Disclosure (CROWDFUND) Act, changed those registration requirements by allowing entrepreneurs and small businesses to raise capital more easily. The CROWDFUND Act enables entrepreneurs and small business owners to issue limited amounts of equity in their ventures to a large number of unaccredited investors via internet-based crowdfunding platforms (Belleflamme et al., 2014). Under the CROWDFUND Act, entrepreneurs may raise up to \$1 million within a 12-month period without registering the equity sales with the Securities and Exchange Commission (SEC). However, the SEC initially limited equity-based crowdfunding to accredited investors even after the passage of the JOBS and CROWDFUND Acts in an effort to better regulate and protect unaccredited investors.

On May 16, 2016, the SEC began allowing entrepreneurs to issue equity in their ventures to unaccredited investors in accordance with the JOBS and CROWDFUND Acts. Under the new SEC guidelines, the maximum dollar amount that unaccredited investors may invest depends on their income or net worth. If the investor has an annual income or net worth under \$100,000, then they can invest the greater of \$2,000 or 5% of

their annual income or net worth. If the investor has an annual income or net worth above \$100,000, then they can invest up to 10% of their annual income or net worth.

Only a few studies have examined antecedents and consequences equity-based crowdfunding because of its brief history (Short, Ketchen, McKenny, Allison, & Ireland, 2017). Belleflamme and coauthors (2014) preemptively examined whether or not founders should consider equity-based crowdfunding over reward-based models in economic terms. They found that equity-based crowdfunding is optimal for entrepreneurs with large capital requirements and small market size. Conversely, entrepreneurs should prefer reward-based crowdfunding when initial capital requirements are small relative to the market size. Another study examined how signals of venture quality can help ventures overcome their related uncertainties and secure investments (Ahlers, Cumming, Gunther, & Schweizer, 2015). These researchers found that human capital and credible financial projections serve as signals of venture quality and reduce uncertainty for potential investors.

Predictors of Investment Likelihood

Prior to the rise of crowdfunding, management research on investment likelihood primarily examined factors that influence traditional, sophisticated investors to invest in ventures (Baum & Silverman, 2004; Hall & Hofer, 1993; MacMillan, Siegel, & Narasimha, 1985; Zacharakis & Meyer, 2000); thus, I review research on investment likelihood for both traditional forms of investment and crowdfunding. Although many ventures seek external capital, some are more attractive to potential investors (Plummer, Allison, & Connelly, 2016). Research shows that investors consider potential investments attractive for numerous reasons (Gupta & Sapienza, 1992; Haar, Starr & McMillan, 1989;

Wetzel, 1983). For example, investors may consider a venture attractive when it holds valuable resources such as proprietary technology or highly skilled personnel (Baum & Silverman, 2004). Investors may also find ventures attractive when the founder possesses industry-relevant experience or passion toward fulfilling the venture's mission (Pollack, Rutherford, & Nagy, 2012). Overall, presence of factors that increase the venture's attractiveness tends to increase the likelihood of investment.

While a multitude of factors related to the venture, industry, or environment may determine a venture's attractiveness, early research demonstrates that the quality of the founding entrepreneur ultimately determines the funding decision (MacMillan et al., 1986). The literature shows that investors focus heavily on characteristics of the founder or lead entrepreneur when assessing and screening potential investments (MacMillan, Zemann, & Subbanarasimha, 1987). This research has examined numerous entrepreneur-related factors including trustworthiness, relevant experience, educational background, and similarities with investors (Florin, Lubatkin, & Schulze, 2003; Franke, Gruber Harhoff, & Henkel, 2006). Taken together, these studies show that founder characteristics have a major effect on investors' decisions to invest.

Two key themes have emerged within research examining the influence of entrepreneurs' characteristics on investment likelihood. First, investors' perceptions of founder trustworthiness influence venture funding decisions (Ding, Au, & Chiang, 2015; Maxwell & Levesque, 2014). Perhaps not surprisingly, when relinquishing control of their money, investors' prefer to give control of that money to a trustworthy individual. However, research on the factors that create trust between investors and entrepreneurs has been fruitful for increasing understanding of how those two parties facilitate resource

exchange. Second, investors consider the extent to which similarities exist between founders and themselves when making funding decisions (Becker-Blease, & Sohl, 2011; Zhang, Soh, & Wong, 2010). Similarities that influence investors attraction to potential founders and investments include educational background, work experiences, and styles of thinking (Murnieks, Haynie, Wiltbank, & Harting, 2011; Franke et al., 2006). Overall, research in these areas shows that investors prefer trustworthy, skilled founders with whom they share similarities.

Trust is a key factor that influences investors' risk perceptions and their likelihood to invest. In the investment context, scholars have identified trust as an important social stimulant under conditions of uncertainty (Maxwell & Levesque, 2014; Larson, 1992). Under such conditions, trust between entrepreneurs and investors fosters increased cooperation, faster decision-making, and more efficient negotiations by reducing the need for negotiation and monitoring (Delmar & Shane, 2006; Harrison, Dibben, & Mason, 1997). In reducing the need for negotiation and monitoring, trust decreases the costs associated with a potential investment and thereby increases the investment's attractiveness.

Research also shows that investors prefer founders with whom they share similarities. Researchers have studied many similarities thought to influence investment likelihood including gender, educational background, professional experience, and decision-making styles. Specifically, researchers have found that gender diverse investment groups are more likely to invest in women-owned ventures than male-only investment groups (Becker-Blease & Sohl, 2011). Further, research shows investors prefer founders with similar educational backgrounds (i.e., management vs. technical

education) and professional experience (i.e., large firm vs. startup) when making investment decisions (Cooper, Gimeno-Gascon, & Woo, 1994; Franke et al., 2006). These findings indicate that investors prefer founders similar to themselves because they share a common frame of reference, which allows for enhanced communication and streamlined decision-making. Moreover, Murnieks and coauthors (2011) performed a study among investor-founder dyads that shows investment likelihood increases when the individuals share similar decision-making styles.

Crowdfunding-specific research has examined how some founder characteristics relate to investment likelihood, but this research is novel and limited (McKenny, Allison, Ketchen, Short, & Ireland, 2017). Researchers have discovered that founders' social capital has a positive influence on contributions to reward-based crowdfunding projects, which loosely indicates trust plays a role in the funding decision (Colombo, Franzoni, & Rossi-Lamastra, 2014). Researchers have also found that human capital in the founding team can serve as a signal of venture quality and thereby increases investment likelihood in equity-based crowdfunding settings (Ahlers et al., 2015). Thus, founders' abilities and experiences also seem to influence equity-based crowdfunders' investment decisions. In terms of investor-founder similarity, researchers have provided some evidence that female crowdfunders are more likely to fund ventures with female founders in a reward-based crowdfunding setting (Greenberg & Mollick, 2017).

Thus, the research on both traditional investors and crowdfunders demonstrates the importance of founder characteristics. Research on both types of investors shows that they generally prefer trustworthy, able and experienced founders with whom they share

similarities. As such, I review literatures related to those preferences in the subsequent sections. To begin, I review research on trust formation.

Trust Formation

Investors prefer to invest in ventures founded by entrepreneurs with whom they have formed trust (Maxwell & Levesque, 2014). Investor-founder trust reduces the need for negotiation and monitoring by reducing the likelihood of opportunistic behavior (Chiles & McMackin, 1996; Williamson 1993). Under conditions of high trust, investors spend less time on pre-investment contracting because they are confident that founders will utilize profits effectively and divide payoffs fairly (Dyer & Chu, 2003). Moreover, trust reduces the need for post-investment monitoring and enforcement because investors will experience less concern about whether entrepreneurs are shirking or fulfilling the agreement (Dyer & Chu, 2003). Thus, in selecting trustworthy entrepreneurs, investors achieve risk reduction and eliminate costs associated with negotiation and monitoring, thereby reducing the risk and increasing the reward of a potential investment.

Prior research defines trust formation as the creation of a psychological state comprising the intention to accept vulnerability based on positive expectations about the intentions or behavior of another (Rousseau, Sitkin, Burt, & Camerer, 1998). McKnight and Cummings (1998) identify two dimensions of this definition: trusting intentions and trusting beliefs. Trusting intentions represent a willingness to make oneself vulnerable to another party in the presence of risk. Conversely, trusting beliefs correspond to one's beliefs about another party's competence or integrity that may lead to trusting intentions. Thus, trusting intentions have an internal focus whereas trusting beliefs apply externally to perceptions concerning the potential partner of a trusting relationship.

While the public and scholars generally believe that trust develops gradually over time (Lewicki & Wiethoff, 2000), research suggests that individuals can form a trusting relationship with another party without any history of interaction (Meyerson, Wieck, & Kramer, 1996). High levels of initial trust may arise for a variety of reasons (McKnight & Cummings, 1998). First, certain individuals may form trust quickly simply because of their disposition to trust. Second, contextual elements such as the presence of institutions that support trustworthy behavior may influence individuals to form trust swiftly based on initial impressions. Lastly, individuals may form initial trust with other specific individuals due to rapid cognitive cues that arise from group membership or stereotypes. Researchers note, however, that high levels of initial trust can be fragile due to the assumption-based nature of its antecedents (McKnight & Cummings, 1998).

The literature on trust formation provides insights concerning how trustors form trusting beliefs about trustees when contact between the two parties is limited or nonexistent (Dunning, Anderson, Schlosser, Ehlebracht, & Fetchenhauer, 2014; McKnight & Cummings, 1998). Studies in this area argue that trusting beliefs form around two major trustee characteristics: competence and integrity (Connelly et al., 2018; Ferrin et al., 2007; Kim, Dirks, Cooper, & Ferrin, 2006; Kim, Ferrin, Cooper, & Dirks, 2004).

Competence-based trust refers to the expectation that the other party is able to fulfill their specified obligations (Cook & Wall, 1980; Lui & Ngo, 2004). For this dimension, expectations of technically proficient performance, functional skill born from experience, and perceptions of reliability, drive trust between two parties (Lee, 2004; Whipple & Frankel, 2000). This type of trust is consistent with previous

conceptualizations wherein trustors form trust based on knowledge or expectations of a trustee's successful performance of their responsibilities (Williamson, 1993). Therefore, a trustor will only perceive an individual as trustworthy if adequate information exists for believing that individual will reliably perform their duties and obligations (Hardin, 1992).

In contrast, integrity-based trust concerns expectations about another party's values, particularly honesty (Kramer, Brewer, & Hanna, 1996). For integrity-based trust, trust between two parties depends on whether an individual adheres to a set of principles that the trustor finds acceptable (Mayer, Davis, & Schoorman, 1995). The emphasis here is on a relational perspective wherein partners focus on the social and attitudinal underpinnings of the relationship (Kramer & Tyler, 1996). A complex set of values and behavioral motives guide trusting relationships. Integrity-based trust exists to the extent that these values and motives align between two parties (Tyler & Degoey, 1996). Integrity-based trust erodes when the parties differ in values and motives (Lewicki, McAllister, & Bies, 1998). Even a single act that demonstrates dishonesty or difference of values and motives can severely damage this dimension of trust (Kramer, 1994; Searle & Ball, 2004).

An important consideration is that competence- and integrity-based trust represent separate constructs that may coexist in a single dyadic relationship (Kim et al., 2004). Low levels of competence-based trust that result from previous failed ventures would not necessarily cause an investor to suspect that a founder is dishonest (Ferrin et al, 2007). Conversely, a lack of integrity-based trust does not necessarily mean that an investor will deem a founder incompetent (Kim et al, 2006). This is because these two dimensions of

trust develop for different reasons and are likely to move somewhat independently of each other (Janowicz-Panjaitan & Krishnan, 2009; Long & Sitkin, 2006).

Notably, research on how individuals resolve discrepancies in their interpersonal perceptions reveals inherent differences in the way people assess positive versus negative information concerning competence and integrity (Snyder & Stukas, 1999). These studies suggest that individuals tend to weigh positive information about competence more heavily than negative information about competence (Madon, Jussim, & Eccles, 1997). Conversely, individuals tend to weigh negative information about integrity more heavily than positive information about integrity (Martijn, Spears, Van der Plight, & Jakobs, 1992). Reeder and Brewer (1979) explain such asymmetrical attributions through a schematic model, which suggests that hierarchically restrictive schema influence how individuals process information about and make attributions concerning competence and integrity.

Hierarchically restrictive schema presume that having an attribute at one end of a continuum will restrict behavior but being on the other end will not. For competence, people intuitively believe those with high competence are capable of performing well or poorly, but those with low competence are only capable of performing poorly (Kim et al., 2004; Martijn et al., 1992). For this reason, observers consider a single successful performance to offer a reliable signal of competence, given the belief that those who are incompetent could not possibly achieve that performance level. On the other hand, poor performance does not necessarily imply incompetence because a competent individual might perform poorly on occasion.

Schemas concerning integrity restrict attributions in a manner opposite to that of competence. People intuitively believe that those with high integrity do not engage in dishonest behavior, whereas those with low integrity can be either honest or dishonest depending on circumstances (Kim et al., 2004; Snyder & Stukas, 1999). Therefore, any occasion wherein an individual appears to act unethically suggests that the individual has low integrity because an individual with high integrity presumably would not ever behave that way. Thus, one instance of dishonesty makes a person dishonest even if that person does not engage in additional dishonest behavior. Conversely, an instance of honest behavior is not proof of high integrity because a person with low integrity will behave honestly in some instances and dishonestly in others.

These differences in the way that people assess positive versus negative information about competence and integrity have important implications for trust formation between individuals. Trustors should be particularly sensitive to information about a trustee's positive performance in the past. This is because a single successful performance offers a reliable signal of competence (Kim et al., 2006). Similarly, trustors should respond strongly to information about a trustee's dishonest actions because one instance of dishonesty reliably signals a lack of integrity (Kim et al., 2004). However, trustors will likely not react to negative information about a trustee's competence or positive information about trustee's integrity because neither provides reliable signals of competence or integrity (Ferrin et al., 2007). As a result, only positive information concerning competence and negative information concerning integrity should have a considerable effect on trust formation.

Social Identity

Social identity theory suggests that people wish to belong to a group as this leads to the positive feeling of social identity (Tajfel, 1972). Social identity rests on intergroup social comparisons that seek to confirm or establish in-group favorability compared to some out-group (Hogg & Terry, 2000). Turner (1975) argued that an underlying need for self-esteem motivates individuals' desire to belong to a favorable in-group. His and others' research shows that through self-perception, individuals categorize themselves according to various characteristics into groups that provide a self-concept (Hogg, Terry, & White, 1995). Individuals have an inventory of such category memberships that vary in relative overall importance to their self-concept. The individual's mind utilizes each of their memberships to create a social identity that both describes and prescribes the individual's attributes as a member of that group (Abrams & Hogg, 1988). In other words, an individual perceives how they should think, feel, and behave according to their group memberships. As such, prototypical characteristics and behaviors abstracted from the group's members define the group and differentiate it from other groups in social situations (Ashforth & Mael, 1989).

In particular contexts, assignment to a specific group generates positive bias and homophilic attraction towards an individual's group through in-group/out-group comparisons (Brewer, 1979). Importantly, one's definition of a group is largely "relational and comparative" (Tajfel & Turner, 1985, p. 16) in that they help to define oneself in relation to individuals in other categories. In terms of sex, the category of *female* is only salient and meaningful in relation to the category of *male*. Further, individuals tend to view such identities as positive when they vest more of their self-concept in those groups (Adler & Adler, 1987). For instance, Jackall (1978) found that

individuals working menial jobs often distanced themselves from the job's implied identity because it was only a step toward their desired career and identity. Thus, in-group bias occurs when individuals vest their self-concept in a group's membership and salient intergroup differences exist between the groups (Turner, 1984).

Research on positive bias towards an individual's group through intergroup comparisons suggests two major effects. First, the in-group may develop negative stereotypes about the out-group that serve to stigmatize the out-group's members in a negative manner (Fiske, Cuddy, Glick, & Xu, 2002; Horwitz & Rabbie, 1982; Wilder, 1981). Hewstone, Jaspars, and Lalljee (1982) studied students from private versus state secondary schools because a history of conflict existed between the two systems. They found that perceptions of intergroup differences existed between the two groups and that out-group perceptions were generally negative. Further, these negative perceptions included implicit self- or group-serving beliefs about why the groups differed that rationalized the success and failures of each group. Second, in-group bias may justify maintaining social distance and supporting the in-group or undermining the out-group (Sunar, 1978). Individuals perceive the in-group as deserving of successes and not failures, while viewing the out-group in an opposite manner. Perrow (1970) found that members of subunits across 12 different firms were less likely to criticize the performance of their unit and more likely to advocate that their unit receive additional resources than were members of any other subunit within their organization. Bates and White (1961) found that among board members, administrators, doctors, and nurses, each group believed it should have more decision-making authority than the other groups were willing to allow.

Social identity research on homophilic attraction suggests that during early stages in the acquaintance process, relatively superficial levels of similarity between individuals influence attraction and subsequent judgmental evaluations (Duck, 1977). In fact, scholars across the social sciences have frequently cited homophily – attraction to and preference for individuals that resemble oneself – as one of the most important social mechanisms affecting early stages of interpersonal attraction (McPherson, Smith-Lovin, & Cook, 2001; Kossinets & Watts, 2009). Research shows that homophily can stem from varied shared similarities between individuals including sex or gender (Ibarra, 1992; Kleinbaum, Stuart, & Tushman, 2013), race (Wimmer & Lewis, 2010), and social class (Kandel, 1966). This research also shows that homophilic attraction to similar individuals produces the in-group, out-group preferences and effects discussed above. For instance, McPherson and Smith-Lovin (1987) found that individuals seek out friendships with others who share similar education and occupational prestige. Another study found that individuals were more likely to engage in supportive peer relations when the individual and peer shared the same race (Bacharach, Bamberger, & Vashdi, 2005).

The literature on social identity and attraction provides insights about superficial similarities between individuals can influence attraction and subsequent behaviors. While this literature points to many similarities that affect attraction, the effects of two superficial factors have received major attention and empirical support: sex and race (Ingram & Morris, 2007; Mollica, Gray & Trevino, 2003).

Sex-similarity. Research on social identity, attraction, and homophily shows that individuals tend to identify with and support others who share their sex and race (McPherson et al., 2001; Shrum, Cheek, & Hunter, 1988; Smith, McPherson, & Smith-

Lovin, 2014). This research shows across a variety of social settings that sex and gender identities become salient and meaningful, thereby causing individuals to act upon those identities and favor other in-group members (Mollica et al., 2003). These studies show that especially in newcomer or unfamiliar settings individuals become aware of their sex or race identity because it is easy to recognize these superficially observable identities among unfamiliar others (Brewer, 1991, Wharton, 1992). As a result, these individuals are attracted to and provide benefits to others with the same sex and race while concurrently withholding those benefits from, and in some cases undermining, others who do not share their sex and race (Ingram & Morris, 2007; Pearce & Xu 2012).

Scholars have widely studied sex similarity as a driving characteristic of homophily among individuals with limited or no prior contact. Research has examined sex homophily in both social and organizational settings. Research in social settings has examined how shared sex influences friendship (Smith et al., 2014), communication (Kossinets & Watts, 2009), approachableness (Ingram & Morris, 2007). These studies all show a general social preference toward individuals with the same sex. Studies in organizational settings have examined how sex similarity influences network formation (Ibarra, 1997), voluntary organizations (McPherson & Smith-Lovin 1987), performance ratings (Castilla, 2011) and work structures (Kalleberg, Knoke, Marsden, & Spaeth, 1996). Each of these studies shows a similar pattern of like-attracted-to-like, with males forming closer, more positive working relationships with males and females also forming stronger, more favorable relationships with other females.

Researchers have also examined the effects of shared identity through sex similarity in entrepreneurial settings. Reuf and coauthors (2003) found that within new

venture founding teams, all-male and all-female teams were more likely than mixed-sex teams. Their results indicate that in-group favorability plays an important role when forming entrepreneurial teams. Scholars have also investigated the effects of homophily on investors' funding decisions (Becker-Blease & Sohl, 2007). This research suggests that women are less likely to receive outside funding than men (Brush, de Bruin, & Welter, 2009; Harrison & Mason, 2007). Homophily likely contributes to this phenomenon because sex-related disparities also exist within investment networks, where only 14% of investors are women (Cain-Miller, 2010; Stuart & Sorenson, 2007).

Race-similarity. Similar research has examined race similarity as a predictor of attraction in early stages of acquaintance. Social attraction research shows that newcomers generally gravitate toward others of their same race when making acquaintance or forming friendships (Ibarra, 1992). These findings are especially strong in circumstances where racial minorities enter racial majority-dominated newcomer settings (Brewer, 1991). Under such circumstances, minority members typically are more aware of their racial identity than majority members, and may find majority-dominated contexts unreceptive and unwelcoming (Ely, 1995; Ibarra, 1995). These individuals may expect less social support or even outright exclusion from majority-dominated social circles based on prior experiences (James, 2000). As a result, racial minority group members have a tendency to seek out informal relationships with other minorities in social settings and organizational settings (Mollica et al., 2003).

Other studies on race-based homophily have uncovered a range of other social and work-related outcomes. Research on dating and mate selection shows that individuals typically attract potential mates who share the same race (Lin & Lundquist, 2013).

Bacharach and coauthors (2005) found that within work units, support behaviors between racially dissimilar peers decreases as the proportion of racially dissimilar others increases in the unit. In other words, when a unit includes one or a few racially dissimilar others, majority members support them at a similar rate to other majority members. However, as the proportion of dissimilar members increases, racial groups form and supportive peer relations between members of those groups decreases over time.

CHAPTER 3: HYPOTHESES

Direct Effects of Trust

In equity-based crowdfunding, investor trust in the founder is an important consideration for their decision about whether to invest in a new venture. Trust is crucial to investors because they forfeit control of money in exchange for equity, and the founder is largely responsible for whether they will ultimately see any return on their investment (Harrison et al., 1997). As opposed to traditional early stage investors that mitigate conflicts of interest with founders through monitoring (Fitza, Matusik, & Mosakowski, 2009; Kaplan & Stromberg, 2001), crowdfunding investors cannot monitor founders to ensure they are making good decisions with the investors' money. Therefore, investors' ability to identify trustworthy founders constitutes one of their fundamental protections against losing their investment. Additionally, equity-based crowdfunders typically invest in an individual founder or a small team and, as a result, cannot rely on the firm's reputation, as stock market investors do when making investments.

When investors have competence-based trust in a founder, they are likely to be confident that the founder will make sound decisions about what to do with the money they raise. Investors attribute competence to founders that have the knowledge and skills necessary to manage their ventures (Kim et al., 2004). Thus, investors are likely to believe that competent founders will utilize their knowledge and skills to make sound strategic decisions (Butler & Cantrell, 1984). Investors should expect competent founders to pursue strategic initiatives that increase their venture's likelihood of survival and

ensure high venture performance. Specifically, investors should anticipate that competent founders will allocate the capital they raise from investors to opportunities that benefit the venture and its stakeholders, whereas less competent founders could waste or squander those funds (Gedajlovic, Lubatkin, & Shulze, 2004). Relatedly, investors are likely to expect that competent founders will make sensible choices about human capital through hiring and firing decisions that benefit the venture's potential for growth (Baum & Silverman, 2004; Forbes, Borchert, Zellmer-Bruhn, & Sapienza, 2006).

When investors have competence-based trust in a founder, they can also be confident that the founder will know which decisions are important and, thus, where to focus their attention. Investors believe that competent founders have the necessary tools to know which decisions will have the greatest impact on the venture (Kim, Ferrin, & Rao, 2008). Competent founders are likely to possess the technical knowledge that is necessary to recognize changing trends in the industry that may require the venture to adjust its current strategic position (Delmar & Shane, 2006). Competent founders are also likely to possess industry-specific knowledge about target customers' needs and demands that determine when product or service pivots are necessary (Cohen & Levinthal, 1990). Moreover, competent founders understand the unique challenges associated with managing a startup (Stuart & Sørensen, 2007). As such, competent founders will focus their attention on important decisions that are specific to startups, which less competent founders might tend to ignore.

Developing competence-based trust in the crowdfunding context, though, is challenging for investors. Investors must rely on the limited biographical information about the venture and founder that the crowdfunding platform requires. While researchers

have identified several important ways that founders communicate their competence to potential investors (Chen, Yao, & Kotha, 2009), platforms limit investor-founder communication and socialization to ensure crowdfunding remains largely a passive source of investment. Investors' inability to communicate and socialize with founders makes it difficult for them to assess a founder's competence through basic social evaluation mechanisms, such as conversations and interviews. Additionally, small investors, who are often the primary target of ventures on equity-based crowdfunding platforms, do not have extensive time and resources to devote to researching and evaluating a founder's competence (Ahlers et al., 2015).

Founders can help investors overcome this challenge by communicating reasons, within the campaign, for investors to have competence-based trust in them. On the campaign page, founders can provide evidence of their competence to investors in a few important ways. Founders might provide examples of their previous industry-specific and entrepreneurial experience. Communicating their experience, especially instances of success, communicates that the founder has experiential knowledge to draw on as they make venture-related decisions (Kotha & George, 2012). Founders can also attempt to convince investors of their knowledge and abilities by association with recognizable industry figures or entrepreneurs. Research shows, for example, that investors examine entrepreneurs' professional network and reputation to overcome uncertainties when considering an investment (Shane & Cable, 2002). Further, founders may use industry- or entrepreneurship-specific terms in their crowdfunding campaigns, instead of the vernacular, to demonstrate their competence. This can be helpful because it serves to

increase investors' appraisals of the founder's legitimacy and plausibility (Navis & Glynn, 2011).

H1: Founders' communication of reasons for potential investors to have competence-based trust in them is positively associated with the likelihood of investment in the venture

Because crowdfunding investors have little ability to monitor the new ventures in which they invest, they also have to worry about potential opportunistic behavior on the part of the venture's founder. Platforms not only limit founder-investor communication and socialization prior to an investment, but also purposefully limit post-investment contact and, as a result, decrease investors' ability monitoring founders for opportunistic behavior. Further, crowdfunding investors are typically small investors that do not have extensive time and resources to devote to monitoring their investments (Ahlers et al., 2015). Therefore, investment through a crowdfunding medium creates a context wherein founders can easily defraud investors of their investment capital by disproportionately increasing salaries, purchasing personal assets with company funds, or engaging in nepotism.

High levels of integrity-based trust in a founder reduce investors' fears about the likelihood of fraudulent behavior. Integrity-based trust is rooted in perceptions about another's motives, honesty, and character (Sitkin & Roth, 1993). Integrity-based trust emerges when an investor believes that a founder adheres to a set of moral principles that guide the founder to act honestly (Kim et al., 2004). Investors may believe that if founders adhere to a set of moral principles that require ethical behavior, then they will not act opportunistically by excessively increasing salaries, purchasing personal assets through company accounts, or hiring unqualified friends and family. Thus, when

investors trust that a founder has integrity, they are less likely to worry that the investor will defraud them of their investment capital.

Integrity-based trust in the founder also improves investors' perceptions of the new venture's ability to establish credibility in the community and legitimacy among customers and suppliers. Founder integrity is not only a desirable quality to potential investors; it is also attractive to other vital stakeholders (Berman, Wicks, Kotha, Jones, 1999). Founders with integrity develop a reputation for honest dealings with the community, customers and suppliers (Park, Lee, & Kim, 2014). Through this positive reputation, the founder is able to build credibility for the venture within its community and garner goodwill and support. A reputation for integrity also enables the founder to gain legitimacy with external stakeholders. Thus, founder integrity may influence the ultimate success of a venture because it enhances their ability to make sales and procure resources.

There is little initial integrity-based in the crowdfunding context. Due to crowdfunding's web-based nature and widespread geographic use, it is unlikely for investors to share social connections with founders to individuals that can vouch for the founder's character (Mollick, 2014). Thus, investors typically cannot rely on personal references when assessing a founder's character. Moreover, regulators are concerned that scammers may use crowdfunding as a means to swindle unsophisticated investors because investors cannot easily monitor a founder after s/he receives their investment capital (Stemler, 2013). These concerns have spread to the public due to rare, but highly visible instances of instances of fraud in crowdfunding (Cumming, Homuf, Karami, &

Schweizer, 2016). As a result, when they consider an investment through crowdfunding, investors have become exceedingly suspicious of founders' intentions.

There are steps a founder can take, though, to help improve the integrity-based trust that investors perceive when they are viewing a crowdfunding campaign. Most importantly, investors trust founders that provide extensive information about themselves (Belleflamme et al., 2013). Investors are suspicious of founders that do not provide a picture or detailed personal information because those founders ostensibly want to conceal their identity. Therefore, founders can improve integrity-based trust by clearly identifying themselves. Additionally, platforms require that founders provide a detailed history of their previous employment and entrepreneurial experience. Within this history, founders can share examples of past honest behavior to foster integrity-based trust with investors. Moreover, equity-based platforms in particular are increasingly providing founders' employment, entrepreneurial, and criminal backgrounds to potential investors. Thus, founders can promote integrity-based trust with investors by acting with professional integrity and not breaking the law prior to launching their current venture.

H2: Founders' communication of reasons for potential investors to have integrity-based trust in them is positively associated with the likelihood of investment in the venture

Since competence and integrity are two foundational types of trust (Butler & Cantrell, 1984; Kim et al., 2004), it may be worthwhile to consider their relative influence in crowdfunding investment decisions. Many scholars have examined the effects of these two types of trust in organizational settings (Connelly, Ketchen, Gangloff, & Shook, 2015; Kim et al., 2004), but few have studied which is more important. One study by Connelly and coauthors (2018) found that integrity-based trust is

more important for managers making decisions about inter-organizational alliances. However, the authors note that they believe this finding could change across contexts. Thus, I propose to test the relative impact of these two types of trust in an investment decision-making setting.

With respect to competence-based trust, crowdfunding investors are likely to understand the risks associated with the possibility that a founder may not perform well. Historically, failure rates among early-stage ventures have been alarmingly high (Hiatt & Sine, 2014; Shook, Priem, & McGee, 2003). According to data from the United States Census Bureau's Business Information Tracking Series, 34% of ventures do not survive the first two years and 50% do not survive four years (Headd, 2003). However, the total annual amount of capital invested in new ventures is steadily increasing (Massolution, 2016). This trend shows that investors are willing to assume the risk of venture failure and investment loss because the reward of a successful early-stage investment is immense.

With respect to integrity-based trust, crowdfunding investors may be less understanding about the risk of *fraud* as opposed to the risk of *failure*. Investors are willing to assume the risk of venture failure to realize the immense potential reward of a successful exit. Fraud, however, increases the risk of an early-stage investment while simultaneously reducing its potential for reward (Bruton & Ahlstrom, 2003). When founders commit fraud by opportunistically using investment capital to benefit themselves instead of the venture, investors are unlikely to recoup their investment. For crowdfunding investors in particular, taking legal action against founders that commit fraud is difficult due to the enormous expense of litigation compared to the size of

investment, which is smaller than VC and angel investments. As a result, crowdfunding investors in particular are likely to be more averse to risk from fraud than risk from failure.

Also with respect to integrity-based trust, investors are likely averse to new ventures that they perceive as illegitimate or that have a poor reputation among buyers and suppliers. As noted above, founder integrity generates credibility, goodwill, and support with outside stakeholders. Founders who have a poor reputation due to a perceived lack of integrity cannot easily build the relationships with key customers and suppliers that are necessary to grow a venture (Pirson & Malhotra, 2011). As a result, when investors perceive that a founder lacks integrity, it is unlikely that they will believe the founder is capable of providing any return on their investment.

In addition to the logic above, there is another reason integrity-based trust may influence investors more so than competence-based trust. Specifically, scholars have found that integrity-based trust generalizes across activities, whereas competence-based trust does not (Kramer, 1994; Mesquita, 2007). Integrity-based trust generalizes because observers always believe an honest individual to be honest, regardless of the context (Connelly, Miller, & Devers, 2012). In other words, investors will believe that a founder will treat them honestly, if that founder acts with integrity toward other stakeholders. In contrast, competence-based trust operates in localized contexts based on evaluations of an individual's competence and reliability (Mesquita, 2007). Investors may trust that a partner is competent in one domain, and therefore trusted in that domain, but not competent or trusted in another (Dirks & Skarlicki, 2004). Thus, competence-based trust

does not generalize to the investor-founder relationship in the same way as integrity-based trust.

Therefore, I expect that investor perceptions of integrity-based trust in a founder will be more important than their perceptions of competence-based trust. Although competence-based trust reduces concerns about venture performance and failure, integrity-based trust removes suspicions about opportunistic behavior and fraud (Lewicki, McAllister, & Bies, 1999). Moreover, integrity-based trust generalizes across activities and relationship, while competence-based trust does not (Connelly et al., 2018). Thus, when these two dimensions of trust operate simultaneously, the integrity component will dominate.

H3: Founders' communication of reasons for potential investors to have integrity-based trust in the entrepreneur is more consequential to the likelihood of investment than communication of reasons for potential investors to have competence-based trust in the entrepreneur

Moderating Effects of Founders' Demographic Characteristics

As crowdfunders assess potential investment opportunities, they may be more susceptible to interpersonal biases and stereotypes toward a venture's founder than other types of early stage investors. This is because, unlike accredited investors, they likely have little or no investing experience and investment training to guide their decision-making. Thus, crowdfunding investors may rely on heuristics and social cues more than traditional early stage investors do when making investment decisions and assessing a venture's founder. Moreover, crowdfunding campaigns present investors with little information about the venture's founder. Typically, campaigns only provide a short biographical sketch and a portrait-style image of the founder. As a result, investors may

view the founder's image and rely on biases and stereotypes to adjust their assumptions about the founder's ability to manage their venture.

I focus on biases and stereotypes related to a founder's sex and race because those are conspicuous characteristics that are visible in the portrait-style image of the founder that platforms require them to provide. Substantial empirical evidence shows that individuals hold and act on biases related to sex and race in various decision-making settings (Pearce & Xu, 2012; Smith, McPherson, & Smith-Lovin, 2014). Thus, I argue that demographic characteristics of founders and shared demographic characteristics between investors and founders can affect how investors interpret founders' claims of trustworthiness.

Sex. Crowdfunding increases both women investors' ability to invest in new ventures and women founders' access to early-stage financing. Male investors have historically dominated traditional forms of early-stage investment, such as VC and angel investment, due to prohibitive wealth and income requirements (Stuart & Sørensen, 2007). Crowdfunding, however, expands women's access to early-stage investing by eliminating income and capital requirements. Consequently, crowdfunding platforms such as iFundWomen have launched for the purposes of advancing female investing and funding more women-led ventures. Due to activist groups that support female entrepreneurship and platforms like iFundWomen, women founders are also utilizing crowdfunding more frequently (Greenberg & Mollick, 2017). As a result, women represent a sizeable portion of both investors and founders, even as high as 38% and 21%, respectively, on the popular Kickstarter platform (Greenberg & Mollick, 2017).

As the number of female investors and founders grows, sex-based biases will likely have a greater influence on how male and female investors interpret claims of competence from opposite-sex founders. To maintain a positive self-concept, members of a social group typically develop positive stereotypes about their in-group and negative stereotypes about their out-group (Fiske et al., 2002). In terms of competence, these stereotypes portray in-group others as qualified and superior and out-group others as unqualified and inferior, thereby creating favorable bias toward the in-group and negative bias toward the out-group (Horwitz & Rabbie, 1982). For example, Schaller (1992) found that male and female respondents consistently rated members of their gender in-group as more capable than members of the out-group for a variety of tasks and qualities. Consistent with this example, I expect that investors may believe same-sex founders' communications of competence because same-sex founders' claims confirm the investor's bias that members of their in-group are inherently more qualified.

Additionally, female investors may be particularly willing to accept a female founder's claims of competence because they might assume that she must possess exceptional qualities to break stereotypical gender roles by pursuing an entrepreneurial endeavor. Historically, women start businesses at a substantially lower rate than men (Coleman, & Robb, 2009; de Bruin, Brush, & Welter, 2006). This lack of female venturing may be, at least in part, the result of traditional gender stereotypes about the type of jobs women should pursue (Bielby & Baron, 1986). Gender stereotypes stipulate that women should seek jobs commensurate with their traditional roles as caregivers and low-wage earners (Wharton & Baron, 1987). As a result, women may view female entrepreneurs as exceptionally knowledgeable and skillful because of the self-confidence

displayed in pursuing an unconventional female career. Therefore, women investors may find a female founder's communications of competence particularly convincing.

H4a: Founder-investor sex similarity positively moderates the relationship between competence-based trust and investment likelihood. The relationship is stronger when a founder and investor share the same sex

Investors' sex-related biases may influence them to accept same-sex founders' claims of integrity more easily than opposite-sex founders. In addition to competence, in-group/out-group biases are associated with stereotypes about integrity that favor the in-group and discredit the out-group (Fiske et al., 2002). Sex-based group stereotypes portray in-group others as virtuous and honorable while out-group others are portrayed as unethical and opportunistic (Six & Eckes, 1991). For example, in a childhood development study, Hilliard and Liben (2010) found that children rated other-sex peers less positively and decreased social interaction with other-sex peers when the experimenters made gender group differences salient to the participants. Consistent with this example, I expect that investors' biases could predispose them to accept same-sex founders' claims that they will not indulge in such behavior as disproportionately increasing their salary, purchasing personal assets with company funds, or engaging in nepotism. Conversely, investors may be skeptical of similar claims made by a opposite-sex founders because their claims conflict with investors' biases.

Further, investors may accept same-sex founders' claims of integrity more easily due to favoritism resulting from homophilic attraction. Homophily, the attraction to others that resemble oneself, represents an important driver of socialization and friendship. For example, Ruef and coauthors (2003) found that entrepreneurs tend to form entrepreneurial teams with same-sex others more often than opposite-sex others. Scholars

believe that homophilic attraction occurs on both the personal and group level, each with a different mechanism for the resulting favoritism. On the personal level, research suggests an affinity for same-sex others may be rooted in vanity (Pearce & Xu, 2012). In other words, a male investor may favor a man over a woman because he sees himself and his self-perceived honesty and ethicality in the former. On the group level, however, homophilic attraction may arise out of a sense of shared social experiences that provide a common frame of reference (Wimmer & Lewis, 2010). Here, a male investor may favor a male founder because he believes that they share a common mindset or outlook that aligns their interests. On both the individual and group levels, I expect the favoritism that results from homophilic attraction may increase investors' propensity to believe a founder's claims of honesty and ethical behavior.

H4b: Founder-investor sex similarity positively moderates the relationship between integrity-based trust and investment likelihood. The relationship is stronger when a founder and investor share the same sex

Race. Crowdfunding increases the ability of various racial groups to access early stage investing as investors or as founders. Early-stage financiers in the United States are disproportionately white. Whites account for 78% of senior VCs but only 63% of the current United States population (Cutler, 2015). While interest in VC and angel investing among Asian investors is rising, Blacks and Hispanics remain underrepresented (Cutler, 2015). Crowdfunding increases access to early-stage investing for these underrepresented minorities by reducing capital requirements and circumventing social barriers. Similar to women's platforms, crowdfunding sites have launched that specifically target minorities. One such platform, MinorityFinance connects minority crowdfunders with minority

founders to advance minority-owned business development in the United States. As a result, crowdfunding participation from minority investors and founders is growing.

Investors' biases may lead them to believe claims of competence from founders who share their race more easily than from founders that do not share their race. One reason is that much like sex-based social groups, members of race-based social groups develop positive stereotypes about their in-group and negative stereotypes about their out-group (Fiske et al., 2002). Members of race-based groups tend to consider themselves as competent and out-group others as less competent (Horwitz & Rabbie, 1982). For example, Phelps and coauthors (2000) conducted an fMRI study that showed Black and White social groups unconsciously experienced positive evaluations of their in-group and negative evaluations of their out-group even when their explicit responses showed no bias. As such, I expect that investors may accept claims of competence from a same-race founder more easily than that of a different-race founder because the same-race founder's claims confirm the investors' innate beliefs about the competence of individuals who share their race.

H5a: Founder-investor race similarity positively moderates the relationship between competence-based trust and investment likelihood. The relationship is stronger when a founder and investor share the same race

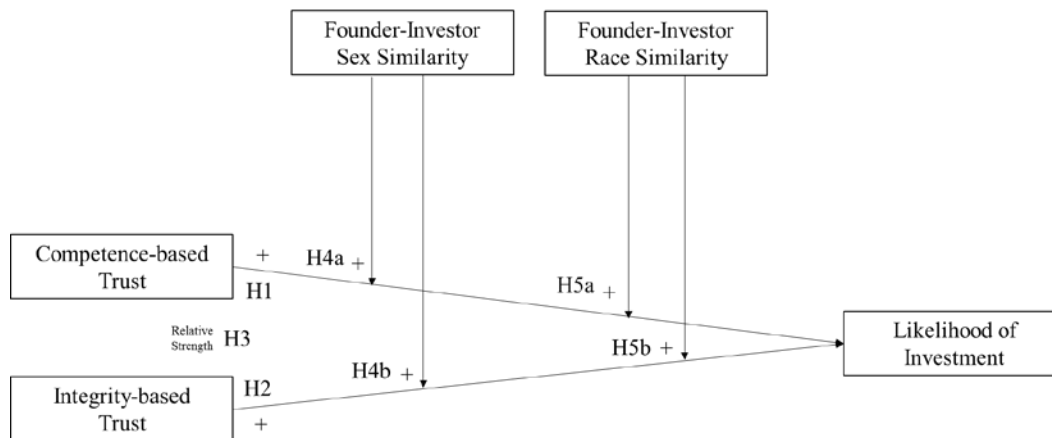
An investor's desire to improve their group's social position may provide additional motivation to accept communications of integrity from founders who share their race. People have a propensity to engage in activism that provides social benefits for their in-group (Hogg & Terry, 2000). Blacks in particular, due to their historical oppression, may seek to support other Blacks to break down shared group-level social barriers (Reagans, 2005). These barriers exist in entrepreneurship, where Black-owned

ventures face persistent difficulty in accessing early-stage capital (Robb, Fairlie, & Robinson, 2009). While a Black investor might not have a particular interest in financing new ventures, they may be motivated to support a Black entrepreneur because of a desire to help someone penetrate barriers with which they can empathize. As a result, I expect investors may have a lower threshold for accepting same-race founders' claims of integrity because supporting same-race founders generates shared social benefits.

H5b: Founder-investor race similarity positively moderates the relationship between integrity-based trust and investment likelihood. The relationship is stronger when a founder and investor share the same race

To summarize, I depict these hypotheses as a conceptual model in Figure 1.

Figure 1
Conceptual Model



CHAPTER 4: METHOD

Data Collection and Sample

I utilized a policy capturing methodology to examine factors associated with the venture or entrepreneur that might influence potential investors' decision to invest. Policy capturing, a technique derived from social judgment theory, is useful for examining decision processes in which the researcher varies levels of critical attributes and combines them to create hypothetical situations (Aiman-Smith, Scullen, and Barr, 2002; Hitt, Ahlstrom, Dacin, Levitas, & Svoboda, 2004). This technique allowed me to decompose the underlying structure of decisions through HLM (Hitt, Dacin, Levitas, Arregle, & Borza, 2000). Researchers have utilized policy capturing in a wide range of studies because it minimizes the effects of cognitive biases associated with self-reports, allows the researcher to assess the reliability of decisions, and controls for external sources of variance and alternative explanations (Connelly, Miller & Devers, 2012). Further, research shows that this methodology reliably reflects actual decisions in field settings (Olson, Dell'Omo, and Jarley, 1992; Wiseman & Levin, 1996).

To test the relationships proposed above, I recruited an initial sample of 250 individuals that met the criteria for investing through equity-based crowdfunding. In May of 2016, the U.S. government loosened restrictions on equity-based crowdfunding to make it available to the public, not just accredited investors. Under these new regulations, anyone over the age of eighteen can invest through crowdfunding up to an annual dollar

amount limit based on their annual income or net worth. The law states that if an investor has an annual income or net worth under \$100,000, then they can invest the greater of \$2,000 or 5% of their annual income or net worth (JOBS Act, 2012). If an investor has an annual income or net worth above \$100,000, then they can invest up to 10% of their annual income or net worth. I focused on individuals with an annual income or net worth of at least \$100,000 to participate in the survey. To test the moderating relationships related to sex- and race-similarity, I required a sample with a mix of both sexes and at least two races. Therefore, I recruited participants such that about a quarter of the sample were Black females, a quarter were Black males, a quarter were White females, and a quarter were White males. I chose to examine Black and White races because prior research shows Black and White individuals tend to evaluate same- and opposite-race others on a range of characteristics more extremely than other races (Ibarra, 1992). I recruited participants through Qualtrix Recruitment Services using the criteria discussed above.

Following the complete data collection effort, I dropped respondents that carelessly responded by using two screening criteria (Meade & Craig, 2012). First, I examined the data to identify non-response across scenarios. For non-response, I screened out any participant that failed to respond in 1/3 of the scenarios or more. I screened out 19 responses due to non-response. Second, I conducted an analysis to determine whether respondents rated repeat scenarios consistently. If a participant's responses to the two repeat scenarios varied by more than two standard deviations in the response variable (i.e., investment likelihood), I dropped the respondent from the data set

(Meade & Craig, 2012). I screened out an additional 21 participants due to inconsistent responses. After screening respondents, I arrived at a final sample of 210 respondents.

Design

Participants in this study received a link to an online survey that included one page of instructions, a scenario-based questionnaire, and a form requesting background information about themselves. The instructions prompted respondents to consider themselves a potential investor interested in equity-based crowdfunding with \$10,000 in their portfolio set aside for an investment. For experimental control, investors considered the same basic investment opportunity in all scenarios, which I presented on the instruction page. I instructed respondents that they should consider each scenario completely independent from the others. I communicated this to clarify that they were not making investment decisions such that an investment in one scenario would reduce the amount of capital in their portfolio to invest in any subsequent scenarios. Therefore, instead of making allocation decisions across scenarios, respondents made an independent decision to invest up to \$10,000 in each scenario. Additionally, the survey allowed respondents to go back and reassess earlier scenarios as they progressed through the survey.

In each scenario, I presented a “Founder Information” section of a crowdfunding campaign page within which I varied both the founder’s biographical information presented within the section’s text and the founder’s demographic characteristics as observed in the portrait-style image embedded in the section. I varied these elements to investigate how investors evaluate the founder when making a decision to invest. All other content within the campaign page remained consistent across all scenarios,

including the minimum (\$0) and maximum (\$10,000) investments. At the end of each scenario respondents faced the decision: how likely are you to invest in the venture based on the information provided in this independent scenario?

In this experiment, respondents evaluated a series of hypothetical scenarios and made decisions about the likelihood they would invest in each hypothetical venture. Each scenario presented respondents with four two-level variables, so a fully crossed factorial design required 16 scenarios. Each instrument also included two replicated scenarios for a total of 18 scenarios. I presented all scenarios to the respondents in random order. I tested for response reliability using the replicated scenarios to demonstrate judgmental consistency. After judging all scenarios, the respondents completed a supplementary questionnaire that allowed me to collect information about the respondents to use as control variables and to perform manipulation checks.

Measures

Dependent variables. Respondents reported their *likelihood of investment* for each scenario on a seven-point Likert scale. Previous studies on investment likelihood have utilized a similar single-item Likert scale to determine funding potential among potential investors (Mittens, Sudek, & Cardon, 2012). I define investment likelihood as the probability they would invest in the venture based on the information provided in the scenario. I also collected a supplemental dependent variable, *investment amount*, for which respondents reported how much they would invest for each scenario. I measured investment amount on a sliding scale that ranges from \$0 to \$10,000. I provide a summary and description of the operationalization of these variables, the moderating variables, and the control variables in Table 2.

TABLE II
Summary of Variables

Variable	Type	Operationalization
Dependent		
<i>Likelihood of investment</i>	Scale	What is the likelihood that you would invest in this campaign based on the information provided in this scenario? (1) Definitely would not invest (2) Strongly unlikely to invest (3) Slightly unlikely to invest (4) Neither likely nor unlikely to invest (5) Slightly likely to invest (6) Strongly likely to invest (7) Definitely would invest
<i>Investment amount</i>	Scale	\$0-----\$10,000
Independent		
<i>Competence-based trust</i>	Dichotomous	(1): Embedded in the founder’s biography: “The founder started a company five years ago, was successful, and sold it two years later for \$5 million” (0): No information provided about competence
<i>Integrity-based trust</i>	Dichotomous	(1): Embedded in the founder’s biography: “In a prior venture, the founder took a pay cut when performance was low in order to meet financial obligations they promised to investors” (0): No information provided about integrity
Moderating		
<i>Sex-similarity</i>	Dichotomous	(1): Respondent’s sex (evidenced by their photograph) matches the founder’s reported sex (0): Respondent’s sex (evidenced by their photograph) does not match the founder’s reported sex
<i>Race-similarity</i>	Dichotomous	(1): Respondent’s race (evidenced by their photograph) matches the founder’s reported race (0): Respondent’s race (evidenced by their photograph) does not match the founder’s reported race
Supplemental Controls		
<i>Education</i>	Scale	What is your level of education? (1) No/some college (2) Bachelor’s degree (3) Some graduate education (4) Masters’ degree (5) Doctorate degree

TABLE II continued

Variable	Type	Operationalization
Supplemental Controls		
<i>Income</i>	Scale	Select the option that best describes your level of annual income (1) \$0 - \$25,000 (2) \$25,001 - \$50,000 (3) \$50,001 - \$75,000 (4) \$75,001 - \$100,000 (5) \$100,001 - \$125,000 (6) \$125,001 - \$150,000 (7) \$150,001 - \$175,000 (8) \$175,001 - \$200,000 (9) \$200,001 - \$225,000 (10) \$225,001 - \$250,000 (11) \$250,001 +
<i>Net worth</i>	Scale	Select the option that best describes your level of net worth (1) \$0 - \$100,000 (2) \$100,001 - \$200,000 (3) \$200,001 - \$300,000 (4) \$300,001 - \$400,000 (5) \$400,001 - \$500,000 (6) \$500,001 - \$600,000 (7) \$600,001 +
<i>Risk preference</i>	7-item assessment	Please evaluate the following statements (A) Safety first. 1 (totally disagree) -- 7 (totally agree). (B) I do not take risks with my money. (1)------(7) (C) I prefer to avoid risk. (1)------(7) (D) I dislike not knowing what is going to happen. (1)------(7) (E) I usually view risk as a challenge. (1)------(7) (F) I view myself as.. 1 (risk avoider) -- 7 (risk seeker)
<i>Crowdfunding familiarity</i>	Scale	How familiar are you with crowdfunding? (1) Not at all familiar (2) Slightly familiar (3) Moderately familiar (4) Very familiar (5) Extremely familiar
<i>Entrepreneurial experience</i>	Dichotomous	Have you ever started a business? (1) Yes (0) No

Independent variables. Each scenario presented two independent variables: competence-based trust and integrity-based trust. Because the context of interest is early stage investment decision making, I framed each variable in terms of the entrepreneur's ability to manage his/her new venture. Competence relates to an individual's possession of the knowledge and skills necessary to perform a task (Kim et al., 2004). Thus, I operationalized *competence-based trust* to reflect the founder's ability to achieve new venture performance and a return on investment for their investors. Specifically, the campaign webpage in each scenario communicated either that the founder has had success with a previous venture (1) or it did not communicate any competence-related information (0). Specifically, for the high competence condition I embedded the following operationalization into the founder's biography within the campaign page: "The founder started a company five years ago, was successful, and sold it two years later for \$5 million." For the contrasting condition, I did not embed any competence-related information about the founder within their biography.

The reason for not including any information for the low condition, as opposed to including negative information, is that it was unrealistic to expect founders to voluntarily provide negative information about themselves. In building a crowdfunding campaign, founders have nearly complete autonomy to include or exclude any information as they see fit. Therefore, founders would likely avoid any topics that might portray them as incompetent or dishonest. I considered whether platforms might require founders to provide information about incompetent or dishonest behavior in past ventures or careers, but I could not find any examples of that happening on actual equity-based crowdfunding sites.

Integrity relates to a person's motives, honesty, and character (Connelly et al., 2018). Integrity-based trust emerges when an observer believes that an individual adheres to a set of moral principles that guide him/her to act honestly and not act opportunistically (Kim et al., 2004). Thus, I operationalized *integrity-based trust* to reflect the founder's disposition to act ethically when it is inconvenient to do so. In each scenario, the campaign webpage either communicated that the founder has previously taken action that benefited their ventures' stakeholders while hurting him/herself (1) or did not communicate any integrity-related information (0). Specifically, for the high integrity condition, I embedded the following operationalization into the founder's biography within the campaign page: "In a prior venture, the founder took a pay cut when performance was low in order to meet financial obligations they promised to investors." Following the previous logic about the low competence condition, for the low integrity condition I did not embed any integrity-related information about the founder within their biography.

Prior to the development of this proposal, I carried out manipulation checks using student volunteers in an undergraduate course at Auburn University to ensure the operationalizations for these two variables accurately reflected competence and integrity. The results of these manipulation checks showed that the 91 respondents viewed the operationalization for high competence as a strong indicator of competence, but not integrity. The results also showed that respondents viewed the operationalization of high integrity as a strong indicator of integrity, but not competence. In conducting these manipulation checks, I asked respondents to indicate their assessment of each operationalization on both a scale of competence and integrity. I measured competence

using the following the following scale: (1) extremely low competence to (4) neither high, nor low competence to (7) extremely high competence. I measured integrity using the following scale: (1) extremely low integrity to (4) neither high, nor low integrity to (7) extremely high integrity. For the high competence operationalization, the average response was 6.06 out of seven on the competence scale, whereas the average response was 4.44 out of seven on the integrity scale. A *t*-test for differences in responses indicated that the manipulations are significantly different from one another, $t(90) = 13.94$ and $p < 0.01$. For the high integrity operationalization, the average response was 6.27 out of seven on the integrity scale, while the average response was 4.54 out of seven on the competence scale. A *t*-test for differences in responses indicated that the manipulations are significantly different from one another, $t(90) = 12.93$ and $p < 0.01$. These results suggest that each operationalization distinctly represents the concept that I intended it to represent.

Moderating variables. Each scenario also presented two moderating variables: sex similarity between the respondent and entrepreneur and race similarity between the respondent and entrepreneur. I used the entrepreneur's photograph embedded within the campaign page of each scenario to vary each of these variables. For *sex similarity*, I presented a picture of either a male or female. I then coded for sex similarity by comparing the sex of the respondent with the sex of the founder in a given scenario. If the respondent's sex matched that of the founder, I coded 1. If the respondent's sex did not match the founder's sex, I coded 0. For *race similarity*, I presented a picture of an individual that is either Black or White. If the respondent's race matched that of the founder, I coded 1. If the respondent's race did not match the founder's race, I coded 0.

In Appendix A, I have included the images I used in the scenarios and grouped the images by sex and race

At the end of the survey, I presented each founder image to the respondents and ask them to indicate their assessment of the founder's sex and race. This served as a manipulation check and confirmed that the respondents correctly assessed the founder's demographic characteristics. In addition, prior to distributing the survey, I performed a pilot test to confirm the pictures I intended to use did not vary in terms of characteristics that might influence investment likelihood. I collected images of six potential entrepreneurs for each of the four sex-race founder combinations. I chose images of people with similar facial expression, posture, and background. I then asked students to rate the images in terms of the subjects' attractiveness and professionalism. I performed a one-way analysis of variance related to pilot test respondents' ratings of key characteristics, which allowed me to settle on final selection of 16 images that did not vary in terms of any important characteristic except for sex and race.

Control variables. I controlled for attributes of the decision makers that could influence their tendencies to invest through a crowdfunding medium. I collected these control variables with a supplemental questionnaire that appeared after the final scenario. I chose to control for respondents' income because individuals with varying levels of disposable income may consider the investment opportunity embedded in the scenarios as more or less risky. I controlled for respondents' *income* by asking respondents to report their annual income using a scale that began at "\$25,000 and below" and increased to "\$250,000 and above" in increments of \$25,000. I chose this range so I could accurately screen for income and maintain adequate variance (i.e., 11-point scale). For the same

reasons, I controlled for investors' *net worth*, which I measured using a scale that began at "\$100,000 and below" and increased to "\$600,000 and above" in increments of \$100,000. As with income, I chose this range to ensure respondents met the minimum net worth requirements to participate in the study and to have adequate variance (i.e., 7-point scale). I controlled for respondents' *age* because research shows crowdfunding tends to be more popular with young people than old people (Mollick, 2014). Individuals with varying levels of education might make investment decisions differently and, as a result, assess founder communications differently (Dimov & Shepherd, 2005). Therefore, I controlled for respondents' *education* level by asking them to indicate their level of education on a scale that ranges from some high school to doctorate-level education. Any type of early-stage venture financing represents a risky form of investment, which risk averse individuals might find unappealing. Therefore, I controlled for respondents' *risk propensity* using a version of the Risk Propensity Assessment developed by Lion and Meertens (2001). I controlled for respondents' *entrepreneurial experience* by coding 1 if they have previously participated in the founding of business and 0 otherwise. I controlled for entrepreneurial experience because individuals that have experience starting a business may interpret the operationalizations for competence and integrity differently than a non-entrepreneur. I controlled for respondents' *crowdfunding familiarity* using a scale that ranged from not at all familiar to extremely familiar because individuals that have participated in crowdfunding before may have developed strong beliefs about crowdfunding that may influence their decision-making.

Analysis

I analyzed the data using HLM, which is particularly appropriate for policy-capturing data because it suits the “nested” nature of the data (Weber & Rynes, 1991). In other words, HLM allows me to examine between-person variance while accounting for within-person variance (Spence & Keeping, 2010). I used Stata 14.0 predictive analysis software for all analyses including data screening, descriptive statistics, and hypothesis testing. To perform the HLM analyses, I utilized the *xtmixed* command, and I grouped observations at the respondent level. In Table III, I report the means, standard deviations, and pairwise correlations for the dependent, independent, moderator, and control variables. The average respondent was 42 years old with a Bachelors’ degree. The mean income of participants was 5.79 on the income scale, which represents the \$125,001 - \$150,000 range. The average net worth of respondents was 3.75 on the net worth scale, which represents the \$300,001- \$400,000 range. A sizeable portion of the respondents, 37.8%, had entrepreneurial experience. Further, on average, respondents were moderately familiar with crowdfunding

In terms of overall model fit, I performed checks to ensure the models accurately described the data. Measures of model fit describe the difference between the sample covariance matrix and a predicted covariance matrix based on the parameter estimates obtained for a specific model (Browne & Cudeck, 1993). The chi-square test is the most common test of model fit (Raudenbush & Bryk, 2000). The chi-square test of the full model, which includes all independent and moderating variables, indicates adequate model fit ($\chi^2 = 630.01, p < 0.01$). Further, the chi-square statistic increases with the addition of each predictor variable, which indicates increasing predictive power across Models 1 through 5 in Table IV.

Table III
Descriptive Statistics and Correlations

Variable	Mean	S.D.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1) Likelihood of investment	4.71	1.75	1											
(2) Income	5.79	2.45	0.13	1										
(3) Net worth	3.75	2.17	0.08	0.36	1									
(4) Age	41.76	16.25	-0.19	-0.01	0.24	1								
(5) Education	2.43	1.24	0.08	0.21	0.11	0.11	1							
(6) Risk propensity	4.22	1.85	0.11	0.08	0.05	-0.05	0.11	1						
(7) Entrepreneurial experience	0.39	0.49	0.08	0.06	0.20	0.16	0.16	0.10	1					
(8) Crowdfunding familiarity	2.89	1.37	0.25	0.21	0.17	-0.2	0.14	0.30	0.28	1				
(9) Competence	0.50	0.50	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1			
(10) Integrity	0.50	0.50	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1		
(11) Sex-similarity	0.50	0.50	-0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1	
(12) Race-similarity	0.50	0.50	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1

Note: Correlations with an absolute value of 0.02 or greater are significant at $p < 0.05$.

Table IV
HLM of Investment Likelihood

Variables	Model 1	Model 2	Model 3	Model 4	Model 5
Income	0.04 (0.03)	0.04 (0.03)	0.04 (0.03)	0.04 (0.03)	0.04 (0.03)
Net worth	0.05 (0.04)	0.05 (0.04)	0.05 (0.04)	0.05 (0.04)	0.05 (0.04)
Age	-0.02** (0.01)	-0.02** (0.01)	-0.02** (0.01)	-0.02** (0.01)	-0.02** (0.01)
Education	0.06 (0.06)	0.06 (0.06)	0.06 (0.06)	0.06 (0.06)	0.06 (0.06)
Risk propensity	0.11* (0.04)	0.10* (0.04)	0.10* (0.04)	0.11* (0.04)	0.11* (0.04)
Entrepreneurial experience	0.17 (0.16)	0.17 (0.16)	0.17 (0.16)	0.17 (0.16)	0.17 (0.16)
Crowdfunding familiarity	0.19** (0.06)	0.19** (0.06)	0.19** (0.06)	0.19** (0.06)	0.19** (0.06)
Sex-similarity	-0.01 (0.04)	-0.01 (0.04)	-0.12* (0.05)	-0.02 (0.04)	-0.13* (0.07)
Race-similarity	0.17** (0.04)	0.16** (0.04)	0.16** (0.04)	0.21** (0.07)	0.21** (0.07)
Competence		0.83** (0.04)	0.79** (0.06)	0.91** (0.06)	0.87** (0.07)
Integrity		0.40** (0.04)	0.34** (0.06)	0.37** (0.06)	0.32** (0.07)
Competence X sex-similarity			0.09 (0.08)		0.09 (0.08)
Integrity X sex-similarity			0.12* (0.06)		0.12* (0.06)
Competence X race-similarity				-0.16* (0.08)	-0.16* (0.08)
Integrity X race-similarity				0.07 (0.08)	0.06 (0.08)
Constant	3.68** (0.42)	3.01** (0.42)	3.04** (0.42)	3.02** (0.42)	3.07** (0.42)
Chi-square statistic	71.79	620.45	624.39	626.03	630.01

Note: N= 3,780 across all models. Two-tailed significance tests. Standard errors are in parentheses.

* $p < 0.05$

** $p < 0.01$

Results of Hypothesis Testing

In Table IV, I present the results of the HLM analyses that test the relationships hypothesized in Chapter 3. Model 1 in Table IV includes only the control variables and the direct effects of the moderators since I do not make hypotheses about the direct effects. Age is a negative significant predictor of investment likelihood. This is likely because crowdfunding, as an early-stage investment mechanism, is more popular with young people than it is with old people (Mollick, 2014). Therefore, younger respondents may have been more comfortable with crowdfunding than older respondents. Equity-based crowdfunding is a risky form of investment, so it is not surprising that risk propensity is a significant positive predictor of investment likelihood. The results also indicate that individuals who are familiar with crowdfunding are more likely to invest than those who are unfamiliar.

I present the tests for Hypotheses 1 through 3 in Model 2. In this model, I included the independent variables and control variables. The results support Hypothesis 1 ($\beta = 0.83, p < 0.01$), which predicted that communications of reasons for investors to have competence-based trust in the founder would be positively associated with likelihood of investment. Hypothesis 2 predicted that communications of integrity would also have a positive association with investment likelihood. The results also support this hypothesis ($\beta = 0.40, p < 0.01$). Hypothesis 3 predicted that communications of integrity-based trust would have a stronger effect on investment likelihood than communications of competence-based trust. Before testing for effect magnitude, I performed a test to ensure that the manipulations for competence and integrity were not different in terms of strength, which might influence effect magnitude. At the end of the

survey, I asked respondents to rate each manipulation on a manipulation strength scale. I measured competence/integrity using two separate scales structured the same way: (1) extremely low competence/integrity to (4) neither high, nor low competence/integrity to (7) extremely high competence/integrity. The mean response on the high operationalization for competence was 5.61 and the mean response for the high operationalization of integrity was 5.68. A *t*-test for differences in responses was not significant, $t(210) = 0.44$ ($p = 0.66$). Therefore, I concluded I could test for differences in effect magnitude without controlling for differences in manipulation strength. In Model 2, the coefficient for competence was larger than the coefficient for integrity. Thus, the results do not support Hypothesis 3. However, to assess whether the effect of competence was significantly greater than the effect of integrity, I performed a chi-square test to assess whether the effects of the two variables were different ($\chi^2 = 58.73$, $p < 0.01$). This statistic suggests that the effect of competence-based trust is significantly greater than the effect of integrity-based trust on investment likelihood. Specifically, my results suggest that the positive effect of communicating competence-related information is 2.1 times greater than the positive effect of communicating integrity-related information on investment likelihood.

I present the tests for Hypotheses 4a and 4b in Model 3. Hypothesis 4a predicted that founder-investor sex similarity would moderate the relationship between competence-based trust and the likelihood of investment, such that the relationship is stronger when investors share the same sex with a founder. In Model 3, the interaction term for competence and sex-similarity is not significant ($\beta = 0.09$, $p = 0.25$). Therefore, Hypothesis 4a is not supported. Hypothesis 4b predicted sex similarity would moderate

the relationship between integrity-based trust and investment likelihood such that the relationship is stronger when sex-similarity is present. The interaction term for integrity and sex-similarity is positive and significant ($\beta = 0.12, p = 0.05$), so the results support Hypothesis 4b. For ease of interpretation, I provide an interaction plot of this relationship in Figure 2. In Figure 2, it is evident that in low integrity scenarios, or those in which the founder did not provide any information about their integrity, investors had a preference opposite-sex founders. However, in high integrity scenarios, wherein the founder provided an anecdote about past honest behavior when managing a previous venture, investors' preference for opposite-sex founders disappeared.

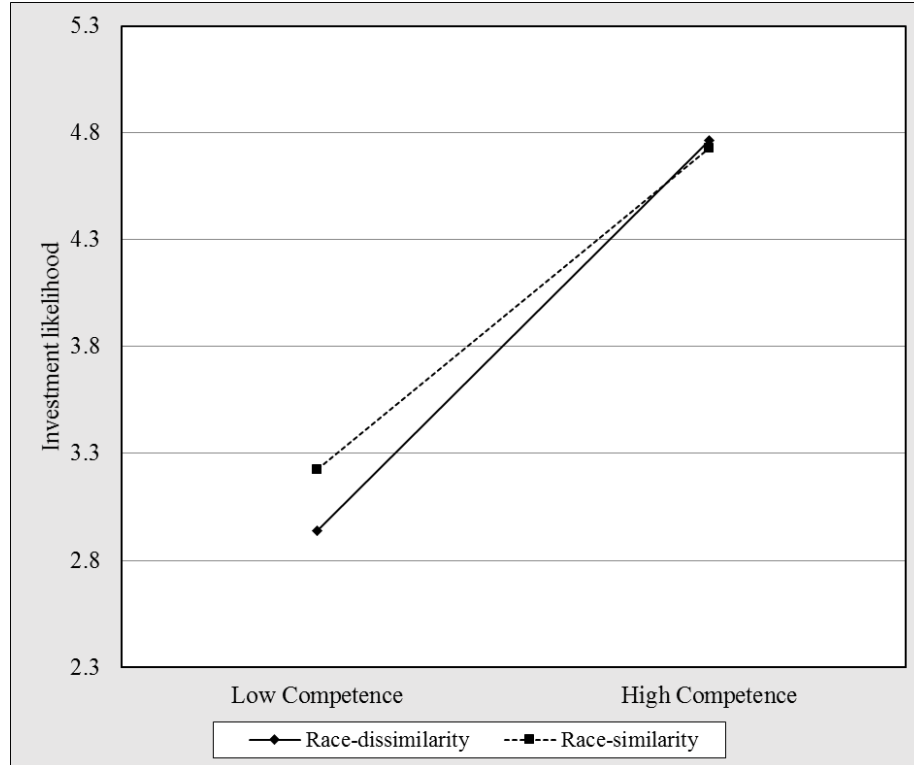
FIGURE 2
INTERACTION PLOT FOR INTEGRITY AND SEX-SIMILARITY



I report the tests for Hypotheses 5a and 5b in Model 4. Hypothesis 5a predicted that founder-investor race similarity would moderate the relationship between

competence-based trust and investment likelihood, such that the relationship is stronger when investors share the same race with founders. In Model 4, the interaction term for competence and race-similarity is negative and significant ($\beta = -0.16, p = 0.04$), so the results do not support Hypothesis 5a. For ease of interpretation, I provide an interaction plot of this relationship in Figure 3. In Figure 3, it is clear that in low competence scenarios, or scenarios in which the founder did not communicate any information about their competence, investors held a preference for same-race founders. However, in high competence scenarios, wherein the founder provided an anecdote about their past competent behavior when managing a previous venture, that preference disappears. Hypothesis 5b predicted that race-similarity would have a strengthening effect on the relationship between integrity-based trust and investment likelihood. The interaction term for integrity and race-similarity is not significant ($\beta = -0.07, p = 0.42$), so the results do not support Hypothesis 5b.

FIGURE 3
INTERACTION PLOT FOR COMPETENCE AND RACE-SIMILARITY



Robustness Check

In order to check for robustness of the results, I also performed the tests of my hypotheses using an alternative operationalization of investment likelihood. At the end of each scenario, I included a supplemental question asking respondents the amount that they would consider investing based on the information in the scenario. Respondents could select values from \$0 to \$10,000 using a sliding scale. I present the results of these tests in Table V.

In Models 1 and 2, I tested for the direct effects of competence and integrity on investment amount. In Model 1, I included the control variables and the direct effects of the moderators since I do not make hypotheses about the direct effects. Consistent with the results using investment likelihood as the dependent variable, age is a significant

negative predictor of investment amount. However, risk propensity and crowdfunding familiarity are not significant predictors of investment amount. In Model 2, I tested for the effects of competence and integrity on investment amount. Consistent with the prior analyses, competence ($\beta = 1179.38, p < 0.01$) and integrity ($\beta = 492.53, p < 0.01$) are both strong positive predictors of investment amount. Further, competence is a stronger predictor of investment amount than integrity. I performed a chi-square test to assess whether the effects of the two variables were different ($\chi^2 = 56.57, p < 0.01$). Similar to the prior analyses, the effect of competence-related information is 2.5 times greater than the effect of integrity-related information on investment likelihood. These findings provide additional support for Hypotheses 1, 2, and 3.

Table V
HLM of Investment Amount

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Income	20.26 (72.56)	20.26 (72.56)	20.23 (72.57)	20.29 (72.56)	20.26 (72.57)
Net worth	130.79 (83.96)	130.79 (83.96)	130.87 (83.97)	130.79 (83.96)	130.87 (83.97)
Age	-23.88* (11.02)	-23.88* (11.02)	-23.89* (11.02)	-23.88* (11.02)	-23.88* (11.02)
Education	147.01 (135.39)	147.01 (135.39)	147.07 (135.40)	147.06 (135.39)	147.12 (135.40)
Risk propensity	137.54 (90.71)	137.54 (90.71)	137.64 (90.71)	137.50 (90.71)	137.59 (90.71)
Entrepreneurial experience	621.26 (356.83)	621.26 (356.83)	621.38 (356.84)	621.14 (356.82)	621.26 (356.84)
Crowdfunding familiarity	101.23 (137.78)	101.23 (137.78)	101.23 (137.79)	101.21 (137.78)	101.21 (137.78)
Sex-similarity	-13.05 (67.58)	-12.88 (64.12)	-72.83 (116.06)	-13.22 (64.13)	-72.98 (115.80)
Race-similarity	268.95** (67.58)	256.49** (64.13)	256.06** (64.13)	236.61* (115.80)	236.86* (115.80)
Competence		1,179.38** (64.26)	1,159.12** (91.15)	1,187.55** (90.95)	1,167.40** (111.04)
Integrity		492.53** (64.66)	453.63** (91.44)	464.87** (91.24)	429.67** (111.34)
Competence X sex-similarity			40.51 (129.29)		40.81 (129.01)
Integrity X sex-similarity			77.80 (129.32)		70.85 (129.04)
Competence X race-similarity				-22.29 (129.01)	-22.80 (129.01)
Integrity X race-similarity				55.54 (129.04)	55.08 (129.05)
Constant	1856.89** (906.79)	1001.12** (907.98)	1030.92** (909.22)	1011.12** (909.27)	1040.46** (910.53)
Chi square	37.50	434.26	434.71	434.50	434.95

Note: N = 3,780 across all models. Two-tailed significance tests. Standard errors are in parentheses.

* $p < 0.05$

** $p < 0.01$

In Models 3 and 4, I tested for the moderating effects of sex-similarity and race-similarity on the positive direct relationships of competence and integrity with investment amount. In Model 3, I included interaction terms for sex-similarity with both competence ($\beta = 40.51, p = 0.75$) and integrity ($\beta = 77.80, p = 0.55$). Neither interaction term is significant. This result is inconsistent with the prior analyses wherein sex-similarity had a significant strengthening effect on the relationship between integrity and investment likelihood. In Model 4, I tested for the moderating effect of race-similarity. The interaction terms for race-similarity with both competence ($\beta = -22.29, p = 0.86$) and integrity ($\beta = 55.53, p = 0.67$) are not significant. This result is inconsistent with the significant, weakening moderating effect of race-similarity on the relationship between competence and investment likelihood from hypothesis testing. In Model 5, I included all variables and interaction terms for a complete model.

To summarize, the results for the robustness check of Hypotheses 1, 2, and 3 were consistent with the prior analyses using investment likelihood as the dependent variable. However, none of the hypothesized moderating relationships were significant in the robustness check. This was consistent with the prior analyses of Hypotheses 4a and 5b, but inconsistent with the results for Hypotheses 4b and 5a.

CHAPTER 5: DISCUSSION AND CONCLUSIONS

In this dissertation, I proposed a model wherein the trustworthy characteristics entrepreneurs' espouse about themselves can help them overcome investors' concerns about being unable to perform oversight in an equity-based crowdfunding context. I also incorporated founder-investor similarity as a boundary condition, which influences investors' propensity to believe founders' assertions about their trustworthiness. This dissertation indicates that founders can increase the likelihood they will receive funding by communicating reasons for investors to trust them. Furthermore, results also show that, in certain scenarios, founder-investor similarities influence how founders' assertions about their trustworthiness affect investors' propensity to make an investment. The following paragraphs discuss the findings of each hypothesis in more detail. I provide a summary of the results in Table VII.

Summary of Results

In the first series of hypotheses, I argued that founders' communications of their trustworthiness would have a positive influence on the likelihood that investors would make an investment. Results indicate that founders' communications of both their competence- and integrity-based trustworthiness positively predict investment likelihood. These results demonstrate that founders can take steps to quell equity-based crowdfunders' concerns about being unable to assess founders before making an investment or monitor them afterward. This finding is largely consistent with research on corporate strategy, wherein firms tend to partner with other organizations with which

they have formed competence- and integrity-based trust (Connelly et al., 2018; Whipple & Frankel, 2000).

TABLE VI
SUMMARY OF RESULTS

Hypothesis	Result
<i>H1: Founders' communication of reasons for potential investors to have competence-based trust in them is positively associated with the likelihood of investment in the venture</i>	Supported
<i>H2: Founders' communication of reasons for potential investors to have integrity-based trust in them is positively associated with the likelihood of investment in the venture</i>	Supported
<i>H3: Founders' communication of reasons for potential investors to have integrity-based trust in the entrepreneur is more consequential to the likelihood of investment than communication of reasons for potential investors to have competence-based trust in the entrepreneur</i>	Not supported (results indicate a significant difference, but competence is more consequential)
<i>H4a: Founder-investor sex similarity positively moderates the relationship between competence-based trust and investment likelihood. The relationship is stronger when a founder and investor share the same sex</i>	Not supported
<i>H4b: Founder-investor sex similarity positively moderates the relationship between integrity-based trust and investment likelihood. The relationship is stronger when a founder and investor share the same sex</i>	Supported
<i>H5a: Founder-investor race similarity positively moderates the relationship between competence-based trust and investment likelihood. The relationship is stronger when a founder and investor share the same race</i>	Not supported (results indicate a significant relationship, but in the opposite direction)
<i>H5b: Founder-investor race similarity positively moderates the relationship between integrity-based trust and investment likelihood. The relationship is stronger when a founder and investor share the same race</i>	Not supported

I also assessed whether integrity-based trust is more consequential to investors than competence-based trust as they make an investment decision. Prior research shows that integrity is more important than competence in the context of interorganizational partnerships (Connelly et al., 2018). However, I find that, in the context of equity-based crowdfunding, competence is of greater importance than integrity. This is somewhat unexpected, considering that equity-based crowdfunders are uniquely vulnerable to fraud when compared to other early-stage investors. It is possible that crowdfunders are less concerned with the threat of fraud than the threat of failure because they think of crowdfunding as way to greatly increase their personal wealth while risking a relatively small amount of money. As a result, they might frame their investment decisions around information that relates to venture performance and growth. Further, since the amount of investment is small, investors might pay less attention to information that relates to the threat of fraud.

In the next series of hypotheses, I suggested that founder-investor sex similarity would moderate the direct relationships in Hypotheses 1 and 2 such that the relationships become stronger when sex-similarity is present. The findings related to sex-similarity were mixed. Sex-similarity did not have a significant moderating effect on the relationship between competence and investment likelihood. This result is somewhat surprising given the widespread evidence that individuals tend to favor their sex in-group (McPherson et al., 2001). Conversely, sex-similarity did have a positive moderating effect on the relationship between integrity and investment likelihood, but the interaction plot indicates a different mechanism than the one described in the Hypotheses section. According to the interaction plot in Figure 2, investors were less likely to invest with

same-sex founders when the founder did not provide information about their integrity. However, the strengthening effect of sex-similarity as a moderator of the relationship between integrity-based trust and investment likelihood demonstrates that communications of integrity help investors overcome distrust with same-sex founders.

In the last series of hypotheses, I argued that founder-investor race-similarity would strengthen the relationships in Hypotheses 1 and 2. The interaction term for competence and race-similarity was negative and significant. This result is inconsistent with previous research on investor favoritism toward founders who have similar characteristics and experiences (Franke et al., 2006). However, the direct effect of race-similarity on investment likelihood was positive and significant. Taken together, these results indicate that when investors share the same race with a founder, they are more likely to invest than when they do not. But, when founders mention their competence, investors are equally likely to invest regardless of the founders' race. Therefore, sharing the same race as an investor does not afford a founder any benefit related to investors accepting their claims about competence.

The results show that race-similarity does not have a significant moderating effect on the relationship between founder integrity and investment likelihood. Again, these results are surprising because prior research suggests individuals that share the same race develop trust more easily than dissimilar individuals (Phelps et al., 2000). While the results indicate that investors are more likely to invest when a founder shares their race overall, the results also show that investors are no more likely to believe same-race founders' assertions about their integrity than they are with other-race founders.

Altogether, the results generally indicate that founders' communication of trustworthiness help investors to overcome their distrust with specific groups of founders rather than strengthening their trust with groups of founders they already find trustworthy. In terms of sex-similarity, investors are less trusting of same-sex founders than opposite-sex founders when the founders do not provide any information about themselves. Same-sex founders are able to overcome this distrust by communicating their integrity, but they are not able to generate trust by communicating their competence. In terms of race-similarity, investors do not trust different-race founders as much as same-race founders. However, different-race founders are able to surmount that distrust by communicating their competence, but they are not able to develop trust with different-race investors by communicating their integrity.

Contributions to the Literature

The findings of this study hold the potential to contribute to the literature in a number of ways. Foremost, this study could contribute to the literature on informal early-stage investor decision-making. Scholars have undertaken extensive research efforts to explore the factors that influence investor decision-making (MacMillan et al., 1987). Within this area of research, founder trustworthiness has emerged as an important investor decision-making criteria (Maxwell & Levesqué, 2014). However, it is still unclear how investors assess founder trustworthiness, and researchers have not yet explored founders' direct communication of their trustworthiness as a predictor of receiving an investment.

The results of this dissertation show that in a minimal-interaction investment environment, founders can reduce investors' wariness by directly communicating reasons

for investors to trust them. As an investment context, crowdfunding is unique in that investors rarely have the opportunity to interpersonally assess founders before making an investment and also do not have the ability to monitor founders for incompetent and unethical behavior after making an investment. Therefore, accurately evaluating a founders' trustworthiness is arguably both more difficult and more important for crowdfunders than for other early-stage investors. This study shows that by communicating reasons for investors to have competence- and integrity-based trust in them, founders can help investors form a more positive evaluation than they would have otherwise and increase their likelihood of receiving an investment.

I also complement the body of extant empirical research on crowdfunding by utilizing a methodology that provides a test of how investors are making decisions about the ventures in which they invest. Prior studies on crowdfunder decision-making have utilized archival or self-report data sources that offer external validation, but little internal validation or experimental control (Cholakova & Clarysse, 2015; Mollick, 2014; Skirnevkiy, Bendig, & Brettel, 2017). Using a policy capturing design allowed me to manipulate the variables of interest and provided robust control of all other potential factors. Thus, I can have greater confidence than I could with self-report or archival data that the study's findings are not confounded by an outside source of variance. As a result, this study provides additional support for theory about the role of trustworthiness, stereotypes, and biases in the decision-making processes of crowdfunders.

This study also could contribute to the literature on trust formation. The results herein demonstrate that individuals form varying levels of initial trust with different groups of people. In this study, investors were less trusting of individuals in their same-

sex group and other-race group. Founders were able to reduce same-sex investors' concerns and increase the likelihood that they would invest by communicating their integrity, but they were not able to do so by communicating their competence. Conversely, founders were able to reduce other-race investors' concerns by communicating their competence but not by communicating their integrity. This finding indicates that people may distrust certain groups of people for reasons related specifically to their perceptions of that group's competence or integrity. However, individuals within the distrusted group may be able to overcome the distrust and achieve parity with other groups by communicating the trustworthy quality that investors believe they lack.

This dissertation could also contribute to the literature on trust formation by exploring the relative influence of competence- versus integrity-based trust. Previous research indicates integrity is more important than competence for maintaining trusting relationships (Connelly et al. 2018). My results offer a contrary finding and show that competence is more important than integrity when individuals are forming trust in an informal, early-stage investment context. This finding reopens the discussion about when and why competence versus integrity may be more important in a trusting relationship. It is possible that individuals are simply concerned with another's competence over their integrity when forming, as opposed to maintaining or repairing, a trusting relationship. However, it is also likely that the early-stage investment context engenders people to focus on information that helps them choose an investment that will generate a large payoff, for which competence-related information would be more meaningful than integrity-related information.

Implications for Practice

This dissertation has potential implications for entrepreneurs and investors who are participating in equity-based crowdfunding. For entrepreneurs, this study shows that they may be able to increase the likelihood they will receive an investment by directly communicating their trustworthiness to investors on their crowdfunding campaign pages. In an investment context as novel as equity-based crowdfunding, where best practices for attracting investors are not yet established, this finding provides entrepreneurs with usable solutions for the problem of generating trust with potential investors in the absence of an interpersonal relationship. Based on the findings of this dissertation, I recommend that entrepreneurs attempt to communicate reasons for investors to have competence- and integrity-based trust in them. In doing so, founders could possibly increase their chances of converting potential investors.

This dissertation also shows entrepreneurs that investors may hold biases about social groups that could create initial distrust and limit their ability to secure an investment (McKenny et al., 2017). This finding increases entrepreneurs' awareness of investor preferences that are somewhat outside of their control, which allows them target investors who might have an inherent tendency to trust and invest with them. More specifically, founders might increase their likelihood of investment by targeting opposite-sex or same-race investors because, according to my results, these groups may be more likely to invest than other investors in other groups. In addition, the findings of this dissertation also indicate that founders can overcome investors' negative biases about them by communicating the trustworthy characteristic that investors believe they lack. In particular, my findings suggest same-sex investors are concerned about founder integrity and other-race investors are concerned about founder competence.

For crowdfunding investors, this dissertation uncovers some hidden biases that might be influencing their investment decisions. Prior research shows that little difference exists between the success rates of male versus female or Black versus White entrepreneurs (Coleman & Robb, 2009; Robb et al., 2009). However, the results of this dissertation indicate similarities and differences related to founders' sex and race significantly influence crowdfunders' decisions about investing in a new venture. This dissertation serves to raise investors' awareness of these biases so that they can make investment decisions based on meaningful criteria rather than inherent biases.

Study Limitations and Future Research Directions

This dissertation is not without limitations. While the experimental design of this study allowed me to test investor decision-making in a controlled and direct way, this dissertation did not examine investor behavior in the field. When making actual investment decisions, it is likely that investors behave in a similar fashion to respondents in this study (Olson, Dell'Omo, & Jarley, 1992; Wiseman & Levin, 1996). However, because making an actual investment decision with earned or saved capital is different than a hypothetical investment decision with imaginary money, it is possible that founders' communications of reasons for investors to have competence- and integrity-based trust in them would not affect crowdfunders to as great of a degree in the field. While it would be difficult to collect demographic data on crowdfunders and, therefore, difficult to test the moderating relationships in the model, future research should seek to replicate the direct relationships in this study using archival data sources.

Another limitation of this study is that, although I theorized about trust formation, I did not directly measure whether investors were developing trust with founders

following their communications of competence and integrity. In the model for this study, I jumped from founders' communications of trustworthiness to the likelihood that an investor would make an investment. My method provided an indirect analysis of investors' trust formation with founders by measuring differences in their investment likelihood under varying circumstances. It is possible, although unlikely, that founders' communications of competence and integrity were influencing investors' perceptions of something other than trustworthiness. Future research efforts should directly examine the extent to which founders' communications of competence and integrity affect investors' trust formation with founders and whether those communications influence any other meaningful investment criteria other than trust.

In terms of experimental design, the study was limited by only using a single manipulation for competence-based trust and a single manipulation for integrity-based trust. There are a number of ways that founders could communicate their competence and integrity to potential investors other than by providing anecdotes about past competent and honest behavior within their biography. For example, a founder might communicate their competence to investors by demonstrating their social connection to famous entrepreneurs and industry figures or by using entrepreneurship- and industry-specific language instead of the vernacular. Additionally, a founder could communicate their integrity to investors by providing detailed personal information or by maintaining a record of lawful and ethical behavior. However, to preserve experimental control and a full factorial design, I could only utilize a single manipulation for both competence- and integrity based trust. Therefore, future research should explore the efficacy of other mechanisms that founders might use to communicate their competence and integrity.

Future research might also consider other potential moderators of the direct relationships in the model. For instance, founder age could influence whether or not investors accept their communications of competence and integrity. Investors may perceive young entrepreneurs as inexperienced or impetuous and vulnerable to acting on a whim, which would make it difficult for investors to accept their claims of competence and integrity (Lee, Pitesa, Thau, & Pillutla, 2015). Conversely, investors might believe or not believe old founders' claims of competence and integrity due to widely held biases about old people (Tillsley, 1990). Specifically, that old people have difficulties understanding new technologies, cannot easily adapting to new ways of doing things, and have high risk aversion (Barker & Mueller, 2002; Hassell & Perrew, 1995). Alternatively, akin to the results of this dissertation, investors may hold an initial distrust of younger or older investors that founders can overcome by communicating their competence and integrity.

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APPENDIX A: FOUNDER IMAGES

Black Females



Black Males



White Females



White Males

