



Explaining gender differences in crowdfunding contribution intentions

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ABSTRACT

Crowdfunding represents digital fundraising channels that may enhance participation of females in project fundraising. The current study aims to analyze the gender differences in effects exerted by cognitive antecedents of financial contribution intentions (CCI) in the context of reward crowdfunding. Specifically, survey data was collected in Ghana, where crowdfunding is at its infancy, and where gender inequality is socially prevalent. Overall, 403 responses are included in the analysis. Data was analyzed using structural equation modelling (SEM), while examining associations between variables in male and female samples separately. First, when using an equality of means test, we show that females exhibit significantly higher levels of CCI, perceived risk, homophily, and prosocial orientation, as well as significantly lower levels of self-efficacy. Second, when using a between-group analysis comparing unstandardized betas, we observe that: (1) self-efficacy has stronger effects on CCI in males; (2) homophily has stronger effects on CCI in females; (3) prosocial orientation's effect on CCI does not differ between genders; (4) a stronger effect of susceptibility to social influence on CCI in females is partially evident; and surprisingly, (5) perceived risk has a stronger negative effect on CCI in males. The results, possible explanations, and implications are then discussed.

1. Introduction

Crowdfunding is a mechanism for project fundraising, where small sums are collected from many backers via online intermediaries [17], and often with limited involvement of traditional financial institutions¹ [86]. Its emergence originates from a combination of the needs of segments underserved by traditional finance [56], efficiencies afforded through internet technologies [94], and the appeal of ideologies heralding democratization of finance and fairer re-allocation of resources in society [22,100]. Such, 'democratization' effect is made possible through the facilitation of free enterprise and capital accumulation by a wide public, while providing opportunities for reducing social inequalities and overcoming certain discrimination patterns [54,67]. Thus, crowdfunding is one manifestation of broader democratized finance solutions, which may also include the employment of blockchain technology in finance as in the issuance of crypto assets and currencies

[25,48]. Regardless of the technology used, these fundraising channels are generally dedicated to serving historically underserved segments such as female-led businesses [23,79] and high-risk early-stage firms [7, 34].

Accordingly, it has been argued that female entrepreneurs may enjoy greater access to finance thanks to the removal of some social barriers and biases previously faced by females in traditional finance circles [40, 85]. This is backed by evidence in studies showing that crowdfunding is associated with increased participation of female funders [51,55], as well as successful fundraising by female-led ventures [53,63]. Furthermore, recent literature reviews revealed that most crowdfunding studies find that female fundraisers are more likely to succeed than male fundraisers [98,101].

While these findings present optimistic developments towards closing the 'gender gap' highlighted in earlier entrepreneurial finance research [97], they often emerge from simplistic use of gender as either a

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¹ Traditional financial institutions are mainstream regulated retail, investment, and commercial banks, brokerages, credit unions, savings and loan associations, venture capital, and investment firms.

control or dichotomous independent variable in related analyses. Here, earlier critique called for the treatment of gender in research as an influence rather than as an indicator, as it better accounts for the actual implications of gender differences [1,80]. Such approach is in line with social feminist theory, suggesting that women and men are fundamentally different thanks to dissimilar life experiences or socialization [15]. Hence, accounting for the ways in which males and females are different is more important than indicating the fact that they are different.

In this study, we wish to bring a social feminist approach to explaining gender differences in effects exerted by cognitive antecedents of crowdfunding backer intentions. Here, earlier research explaining backer intentionality in crowdfunding have built on a variety of theories including signaling theory [e.g., Refs. [2,74,77,110]], trust theory [e.g., Refs. [66,73,76]], self-determination theory [e.g., Refs. [30,112,113]], the theory of planned behavior [e.g., Refs. [9,29,99]], persuasion theory [e.g., Refs. [3,102,114]], and the technology acceptance model [e.g., Refs. [43,62]]. However, common to all of these approaches is gender neutrality, and hence potential underestimation of implications of gender differences among prospective backers.

Recent studies that did seek to address inconsistencies in earlier research on gender and crowdfunding success proposed alternative frameworks through theoretical integrations [69,71]. Nevertheless, such efforts at theoretical integration examined gender differences from the perspective of fundraisers/entrepreneurs, and not from the perspective of the backers. Accordingly, we propose a new alternative and integrative framework that highlights critical ways in which males and females are different and empirically examine their effects on crowdfunding backers' contribution intentions. Specifically, we examine the extent to which perceived risk, self-efficacy, homophily, prosocial orientation, and susceptibility to social influence affect backer intentions differently in males and females. We argue for the relevance of each of these factors based on findings from earlier research at the intersection of gender and related economic behavior, and uniquely test for their effects simultaneously as part of one integrated model explaining crowdfunding backer intentions.

Hoping to further amplify relevant effects, we conduct our study in Ghana. This context is deemed relevant for several reasons. First, it represents a fast-growing lower middle-income economy [108], where females' access to finance via traditional institutions has been more limited [24]. Second, it represents a social environment characterized by high gender inequality [33,39]. Third, crowdfunding has only recently been introduced in Ghana with several platforms already operating in the market overseeing volumes surpassing half a billion USD in 2020 [119]. Fourth, Crowdfunding is currently being reviewed by policymakers as a vehicle for unlocking new sources for economic growth [11, 84]. Fifth, we are answering earlier calls for studies of crowdfunding in the understudied African context [27]. And, furthermore, such approach follows Henrich et al.'s [58] recommendation of reducing social researchers' reliance on samples from 'WEIRD' societies (Western, Educated, Industrialized, Rich and Democratic), while accommodating plurality of insights emerging from relevant though less studied contexts.

As such, Ghana represents a new market untainted by crowdfunding experience, where crowdfunding carries specific promise in improving female participation in financial activity in an otherwise gender unequal social environment. Hence, we conduct our analyses based on survey data collected from 403 respondents at a Ghanaian university. Data analyses employed Structural Equation Modelling (SEM) and a series of quality tests alleviating concerns with various potential biases.

Our results show that females exhibit significantly higher levels of contribution intentions (hereafter 'CCI'), perceived risk, homophily, and prosocial orientation, as well as significantly lower levels of self-efficacy. Moreover, when examining how different aspects affect intentions differently in each gender group, we first find that self-efficacy has stronger effects on CCI in males. Second, homophily has stronger effects on CCI in females. Third, there are no gender differences in the

extent to which prosocial orientation is associated with CCI. Fourth, we find partial support that susceptibility to social influence may exert stronger effects on CCI among females. Finally, and surprisingly, perceived risk has a stronger negative effect on CCI in males.

Overall, our study presents several contributions. First, we propose and test a novel integrative gender-based model explaining CCI, as inspired by social feminist theory, and accumulated knowledge on gender differences in financial backing and investment behavior. As such, it represents a new effort of testing related effects identified in independent studies simultaneously in the context of crowdfunding backer intentionality. Hence, allowing us to dig deeper into gender as influence and go beyond its common use as an indicator or control variable [1,80,98]. Second, we specifically show differences in the extent to which the cognitive antecedents of self-efficacy, risk perception, homophily, and susceptibility to social influence affect CCIs differently among males and females. And, third, we answer calls for greater use of primary data collected from relevant stakeholders, and for greater coverage of understudied environments such as developing economies in general [88,101] and African markets in particular [27].

In the remainder of the paper, we first present a literature review on crowdfunding backer intentionality. Building on social feminist critique, we then propose a gender-based model as an alternative framework for explaining backer intentionality, while suggesting a series of related hypotheses for testing. Next, we present our methodological choices, which are followed by the results of the analyses conducted. Our findings are then discussed in light of earlier literature, while highlighting both relevant contributions and limitations. Finally, we conclude with implications for future research and practice.

2. Literature review

Crowdfunding backers' behavior and its antecedents have become a growing area of interest, paralleling the industry's fast growth and wide reach in recent years. Here, understanding of people's decision making towards supporting crowdfunding campaigns is viewed as critical for the success of such campaigns and the thriving of the community. Various authors have taken to the task, while building their studies on well-established theories. One stream includes studies that follow the logic of signaling theory [e.g., Refs. [2,74,77,110]], where various crowdfunding campaign elements are used by prospective backers as informational signals. Such signals help to moderate perceived risks that emerge from the inherent information asymmetry characterizing transactions between people that may otherwise not be familiar with each other, and may have different levels of knowledge about the fundraiser. Here, richer communication reduces uncertainties, enhances product legitimacy, and, hence, the likelihood of campaign success overall [19].

A second stream draws on trust theory and examines the effects of both calculative and affective trust on funders' intentions and behavior [e.g., Refs. [66,73,76]]. Similar to the previous stream, the main focus is on reducing information asymmetries through strategic trust management, where certain campaign activities should be amplified under different trust conditions to both leverage existing trust, as well as nurture trust with new contacts [8].

A third approach focuses on understanding backers' motivations while drawing on self-determination theory [e.g., Refs. [30,112,113]]. Such studies focus on identification and satisfaction of both intrinsic (e.g., personal growth, sense of self-worth, sense of happiness, etc.) and extrinsic (e.g., financial returns, products, social approval, etc.) motivations, as key to attracting prospective backers. Others, following a similar approach, distinguish between egoistic and altruistic motivations [105]. Within this stream, there is a group of studies specifically arguing that backers contribution is congruent with enhancing their well-being, and campaigns are more likely to succeed when enhancing backers' experience of positive emotions, engagement, relationships, sense of meaning, and sense of accomplishment [45].

A fourth stream, drawing on social psychology, views crowdfunding contribution as a volitional behavior subjected to the assumptions of the theory of planned behavior [e.g., Refs. [9,29,99]]. These studies show the roles played by favorable attitudes, subjective norms, perceived behavioral control, and self-efficacy in enhancing backers' contribution intentions and behavior; as well as the extent to which these vary across-cultures [103].

A fifth stream uses persuasion theory in general and the Elaboration Likelihood Model (ELM) in particular, to exhibit how different cues embedded in a variety of informational elements enhance persuasion through both central and peripheral routes [e.g., Refs. [3,102,114]]. Such studies classify informational elements of campaigns and examine under which conditions they prove most effective at persuading prospective backers to both develop contribution intentions and trigger related contribution behaviors [102].

Finally, a sixth stream draws on the technology acceptance model [e.g., Refs. [43,62]]. Such an approach focuses on facilitators of technological innovation adoption, while highlighting the roles of perceived usefulness and perceived ease of use of a new technology among its prospective users.

While the above present interesting and valid arguments explaining crowdfunding contribution intentionality and behavior, they draw on gender neutral theories, which may underestimate relevant gender differences. According to social feminist theory, people of different genders go through different socialization experiences resulting in different yet equally valid self-perceptions, motivations, and beliefs [15]. Since these cognitive and motivational aspects represent antecedents of intentions in all the theories mentioned above, ignoring the way in which they differ between genders may camouflage important gender effects. This concern is further exacerbated considering literature reviews systematically documenting gender differences and particularities in both funding and investment behavior [97,98,115].

To address this gap and assess its relevance, we propose a gender-based model explaining crowdfunding contribution intentions (CCI). We develop the model through identification of critical antecedents of funding decisions for which literature has documented gender differences before. We then argue for the relevance of each antecedent and conclude with a series of hypotheses, which jointly constitute our model. In this respect, the proposed model reflects an integration of earlier findings about gender differences across theories and from separate independent studies, while showing both gender differences and, more importantly, the different ways in which they affect CCI. The modelling of factors exhibiting gender differences simultaneously as part of one model is one of the contributions of such an integrative approach. Here, since little research has examined gender's role as an influence rather than an indicator in crowdfunding backer intentions and behavior, we will draw on literature covering gender and economic behavior in general and supplement it with the relevant studies available specifically in the crowdfunding context.

Furthermore, we specify our model to the context of the non-investment crowdfunding known as 'reward crowdfunding'. Under such model, backers provide funding to individuals, projects, or organizations in exchange for non-monetary rewards, products, or services, while accepting a degree of risk of non-delivery on campaign promises [99]. We focus on this model for several reasons. First, at a global level, the largest portions of female backers is evident in non-investment models of crowdfunding, representing 48% of all backers in reward crowdfunding, and 49% in donation crowdfunding [119]. Second, research shows that females exhibited a higher degree of contribution behavior in reward crowdfunding both when using objective and subjective measures of such behavior [99]. And third, since reward crowdfunding is associated with contributions of relatively low sums, proximity to familiar concepts of presales and ecommerce [86], and lighter regulatory requirements than investment models, it can be viewed as an entry stage into crowdfunding with lower thresholds for backer adoption of such fundraising methods.

2.1. Risk perception

Research documents higher levels of risk aversion among women, especially as related to financial decision making and investment behavior [e.g., Refs. [16,68,90]]. Here, it is argued that women are more concerned about venture failure when considering entrepreneurship in general [111], and hence also adopt stricter decision criteria when considering funding it [18]. Accordingly, a literature review on gender differences as related to preferences in economic behavior revealed that females are more risk averse than males irrespective of whether research is set as an experiment or a field study [37]. Furthermore, a literature review focusing on female investment behavior, found that risk aversion is one of the most consistent variables influencing females' investment decisions across studies [97].

In the context of crowdfunding, some show that females invest less in risky equity investments and invest more in less risky investment products such as bonds [59]. Even when investing in equity, they tend to invest less in younger firms, those with small teams, or those offering larger shares of equity [31,85,109], as those are often viewed as signaling greater risk. While reward crowdfunding does not reflect the same levels of risk as investment models, it is associated with risks of late or non-delivery on campaign promises [5,118]. Hence, one can extend the negative relations between risk perceptions and financial backing behavior also into the context of backer CCI in reward crowdfunding. Accordingly, we hypothesize the following:

H1. The negative association between risk perceptions and contribution intentions will be stronger in females than males.

2.2. Self-efficacy

Self-efficacy is one's perception about his or her own ability to perform a behavior [10]. Earlier research showed that females tend to exhibit lower levels of both confidence [47] and overconfidence [13] than men in tasks such as financial investments, as well as more general handling of money [91], and, hence, leading to their lower level of involvement in such activities. Even within the financial industry, research shows that female loan officers exhibit lower confidence in awarding credit to un-established borrowers than male loan officers [18]. In the context of equity crowdfunding it has been argued that the combination of low minimum investment requirements and opportunities to accumulate experiences may aid females in improving their investment skills [12], and by extension their confidence towards engaging in them.

Overall, empirical evidence presents a positive association between self-efficacy levels and CCI in reward crowdfunding [70,99]. However, such insights do not consider the potential role that gender may have on such effects. Hence, when bringing earlier insights into the relative overconfidence of males in handling money and financials into the reward crowdfunding context, we suggest that such overconfidence will exert a greater influence over CCI in males than in females. Accordingly, we hypothesize the following:

H2. The positive association between perceived self-efficacy and contribution intentions will be stronger in males than females.

While both risk perception and self-efficacy may have independent effects on behavioral intentions, the two may also be closely related. Specifically, one can assume that the degree of self-efficacy may influence estimations of risks. Indeed, earlier research has often discussed both effects, arguing that low confidence in females explains their risk averting behavior [13,37,87], and that evidence of risk aversion is an indication of low self-confidence [18]. Applying this logic into crowdfunding, one can argue that risk may mediate the effect of self-efficacy on CCI. However, since males tend to exhibit greater degrees of confidence, they may be more prone to underestimate related risks. And, in return, such underestimation of risk may further boost their CCI. Hence,

we hypothesize the following:

H3 (a). The negative association between perceived self-efficacy and risk perceptions will be stronger in males than females.

H3 (b). The extent to which risk perceptions mediate the effect of self-efficacy on contribution intentions will be stronger in males than in females.

2.3. Homophily

Homophily is the tendency of individuals to associate with others based on shared or similar characteristics [82]. In their review of the consequences of homophily, Ertug et al. [46] highlight that it has both positive and negative aspects, as it can both lead to smoother coordination, better communication, and enhanced trust between actors, as well as limit exposure to relevant knowledge, perspectives, and other resources that an actor may access through social contacts. In the context of fundraising, homophily has been identified as a critical consideration for funding flows between backers and receivers. Here research shows that perceived homophily influences financial decision making [107], investment behavior [15,92], as well as loan approval by loan officers [116].

One factor which may induce homophily is being members of the same sex. Specifically in the case of women, sex-based homophily goes beyond biological affinity and may also represent corrective discrimination favoring fellow-women fundraisers as members of a minority in otherwise male dominant environments [53]. Similarly, it was shown that women donate more to women-related causes based on shared experiences of the implications of gender inequality [41].

In the crowdfunding context, research finds evidence for an effect of gender-based homophily. In equity crowdfunding, females tend to invest to a greater extent in female led firms [31,109], however, some highlight that this is evident with respect to inexperienced female investors but not in the case of experienced female investors [12]. In reward crowdfunding, research shows that both genders have a tendency to fund entrepreneurs of their own gender [51], and that such tendencies emerge both with respect to superficial fit (same gender) and characteristic fit (how projects are viewed by members of the same gender) [75]. Others find that females support friends and family to a greater extent than male backers, and they support fellow female creators to a greater extent than men backers [55]. A different study suggests an activist form of homophily, where a small proportion of female backers disproportionately support women-led projects in areas where women are historically underrepresented [53]. Building on the above insights, we hypothesize the following:

H4. The positive association between perceived homophily and contribution intentions will be stronger in females than males.

2.4. Prosocial orientation

Prosocial orientation is defined as the focus on the needs of others and an inclination to enhance the welfare of others [35]. Here, research into gender and values showed that females are more likely to express concern and responsibility for the well-being of others than their male peers [20], that empathy is more strongly developed among women [64], and that women exhibit stronger tendencies towards cooperative behavior [50]. Evidence for this is especially clear in studies of charitable giving, showing that women's higher empathic concern and the principle of care explain their likelihood to give to charity, give more, and to a wider set of sectors and needs [42,83,104].

Similar evidence has also emerged in crowdfunding research. Generally, empathy [78], prosocial motivations [72], altruistic motivations [95], and concerns with well-being [45], have been found to positively associate with CCI in non-investment models such as reward and donation crowdfunding. When also considering gender, it was

showed that the relationship between other-orientation and funding decision was stronger among women, while the relationship for self-orientation was stronger among men [117]. Furthermore, it was argued that women's tendency to contribute earlier in the campaign process indicates an altruistic motivation rather than a reward motivation, which better characterizes late contributors [95]. Accordingly, we hypothesize the following:

H5. The positive association between perceived prosocial orientation and contribution intentions will be stronger in females than males.

2.5. Susceptibility to social influence

Susceptibility to social influence is viewed as one's tendency to change attitudes, intentions, communication, and behavior in response to others' activities [106]. One important aspect of susceptibility to social influence is the willingness to conform with demands and expectations of others in one's social circle [14]. With respect to gender, earlier research found that women were more conforming than men in group pressure situations [44], tend to experience higher social pressure, and react more strongly when facing social pressure [37].

We suggest that, in the context of crowdfunding, susceptibility to social influence reflects the willingness to conform with expectations of others in one's social circle about supporting crowdfunding campaigns. Here, research in crowdfunding has demonstrated a positive association between a person's perception of subjective norms (the degree of perceived encouragement from close social circle to contribute to crowdfunding) and CCI [9,99,103]. Furthermore, it has been documented that internal social capital, within the crowdfunding community, has increasing positive impact through time [26]. However, these studies did not examine gender differences. Hence, when applying the findings about women's greater tendency to conform in other contexts, as presented earlier, one can expect that complying with norms about contribution will enhance their intentions to do so. Accordingly, we hypothesize the following:

H6. The positive association between susceptibility to social influence and contribution intentions will be stronger in females than males.

In this context, research on charitable giving suggested that because women exhibit a stronger principle of care, when faced with expectations to act in line with that principle by their environment, they experience increased social pressure to give [42]. A different study into donation giving found that only females increase donations after receiving social information that suggests generosity to be the prevailing social norm [52]. Furthermore, it has also been shown that women's stronger empathy for members of their close social circle results in them investing more in friends and family as "love money" with lower return expectations [81]. Accordingly, we hypothesize the following:

H7 (a). The positive association between prosocial orientation and susceptibility to social influence will be stronger in females than males.

H7 (b). The extent to which susceptibility to social influence will mediate the effect of pro-social orientation on contribution intentions will be stronger in females than males.

Similarly, the relations between susceptibility to social influence and homophily may also be intertwined. Here, earlier research showed that homophily along various demographic characteristics between advisor and advisee were influential in both males' and females' likelihood to follow financial advice [107]. And, specifically in crowdfunding, some showed that reciprocal obligation and sense of shared struggle drives females' willingness to contribute to fundraisers, when they themselves have fundraised before [55]. Accordingly, we hypothesize the following:

H8 (a). The positive association between perceived homophily and susceptibility to social influence will be stronger in females than males.

H8 (b). The extent to which susceptibility to social influence will

mediate the effect of homophily on contribution intentions will be stronger in females than males.

Finally, susceptibility to social influence may also be influenced by perceptions of self-efficacy. Here, psychological experiments reveal that when women exhibit lower confidence in making a decision, they are more likely to use social information due to an activation of an adaptive learning strategy, which is itself colored by gender stereotypes [38]. Accordingly, since women exhibit lower confidence in financial dealings [13,47], they may become more susceptible to social influence when making related decisions. Here, observations of females replicating male investors in equity crowdfunding, while not replicating the actions of their female peers, were explained by a latent assumption about women being less competent in masculine activities such as investment [85]. Accordingly, we hypothesize the following:

H9 (a). The negative association between self-efficacy and susceptibility to social influence will be stronger in females than males.

H9 (b). The extent to which susceptibility to social influence will mediate the effect of self-efficacy on contribution intentions will be stronger in females than males.

In summary, Fig. 1 graphically presents the model of our hypothesized relations.

3. Method

3.1. Context

The study is conducted in Ghana, which was chosen as an interesting and relevant context for several reasons. First, it represents a fast-growing economy where females' access to finance via traditional institutions has been limited [24]. Second, it represents a social environment characterized by relatively high gender inequality, ranking 107th of 153 states on the 2020 Global Gender Gap Index [39] and 138th of 189 states on the 2019 Gender Inequality Index [33]; which may allow to amplify and better capture gender related effects. Indeed, in Ghanaian society, males are socialized to embody assertiveness, a willingness to take risks, achievement orientation, independence, and innovation,

while females are expected to prioritize modesty and the needs of others over their own [21]. Furthermore, the country's pronounced inclination towards collectivist social structures [61] adds significance to studying crowdfunding as a collectivist method for acquiring financial resources. Third, despite being a young crowdfunding market, Ghana was already reported to oversee more than half a billion USD in 2020 [119] and has several platforms operating within it (e.g., Kickstarter, GofundMed, Kiva, Deki, Zidicircle, and Cofundie). Fourth, crowdfunding is now on local policymakers' agenda in support of unlocking new sources for economic growth [11,84]. Fifth, we are answering concrete calls for studies of crowdfunding in Africa, as an understudied environment in current research [27]. And, finally, by conducting the study in Ghana we follow Henrich et al.'s [58] recommendation of reducing social researchers' reliance on samples from 'WEIRD' societies (Western, Educated, Industrialized, Rich and Democratic), while accommodating plurality of insights emerging from relevant though less studied contexts.

3.2. Data collection and sample

We collected data from postgraduate students at KNUST's (Kwame Nkrumah University of Science and Technology) school of business during spring 2021, which has a population just over 1000 postgraduate students. We used in-class paper survey that was distributed to a total of 500 students after an in-class introduction to crowdfunding. This introduction was designed to be neutral, informative, and as a measure to ensure a common minimum understanding of the concept. We opted to sample postgraduate students as they better represent the working age adult public. The survey was conducted in English and was answered anonymously.

A total of 456 respondents participated in the survey, of which 403 returned surveys were useable. This number of observations was deemed sufficient, and surpassed the recommended minimum of 200 respondents for structural equation modelling (SEM) analyses [57]. Table 1 presents descriptive statistics for our sample, showing it has a close to equal distribution of males and females. Majority of males (23.6%) and females (21.5%) spend between 1 and 2 h and up to an hour respectively on online browsing and searches. Similarly, both males

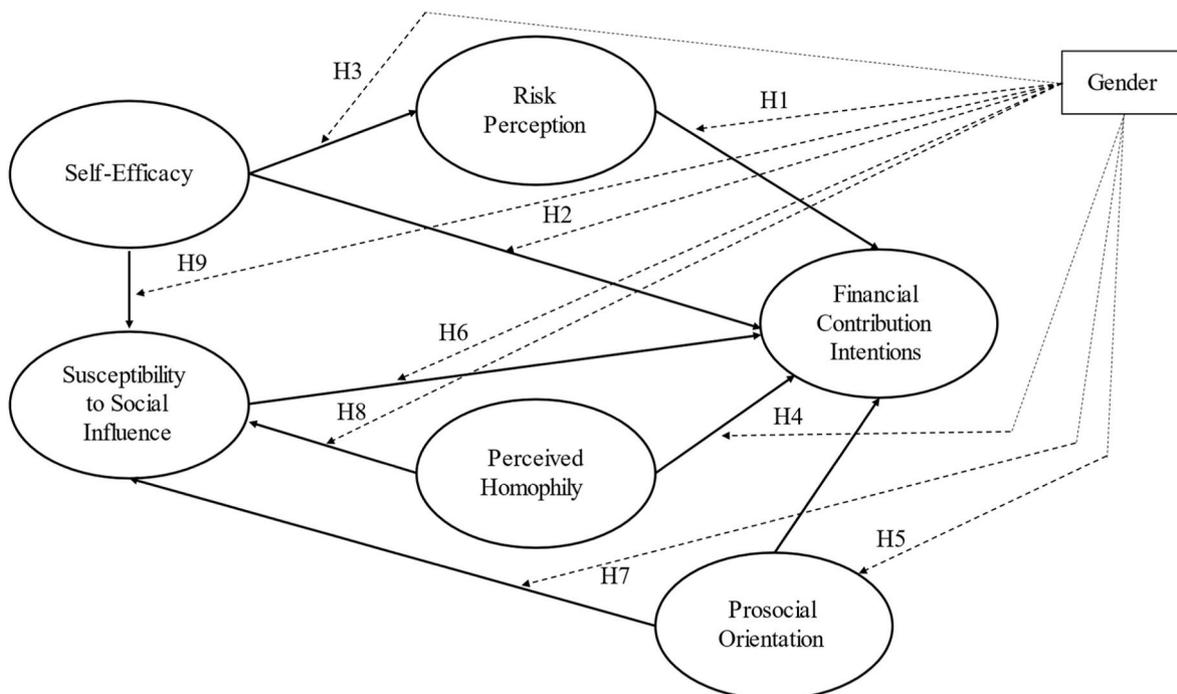


Fig. 1. Gender-based model of crowdfunding contribution intentions.

Table 1
Descriptive statistics.

Variable	Categories	Full Sample	Female	Male
Age	Mean	31.63	30.4	32.85
	SD	6.21	5.68	6.47
	Maximum	62	61	62
	Minimum	21	21	22
Employment status	Fully employed	223	108	115
	Partly employed	54	28	26
	Fully self-employed	19	8	11
	Partly self-employed	29	13	16
	Unemployed/student	78	43	35
	Average daily time devoted to online browsing, search, and news	Zero	17	6
Up to 1 h		84	43	41
1–2 h		86	38	48
2–3 h		72	39	33
3–4 h		70	35	35
5 h or more		74	39	35
Average daily time devoted to using social and professional networking sites	Zero	24	15	9
	Up to 1 h	86	46	40
	1–2 h	74	31	43
	2–3 h	73	31	42
	3–4 h	85	42	43
	5 h or more	61	35	26

Full sample = 403, Female N = 200, Male N = 203.

(19.7%) and females (23.0%) spend up to an hour on professional and social networking sites. The frequency distribution of employment status depict that a high percentage of both males (56.7%) and females (54.0%) are fully employed. Mean age of male respondents is 32.85 years, with a minimum age of 22 years and a maximum of 62 years. For the female respondents, mean age is 31.63 years, with a minimum age of 21 years and a maximum age of 61 years.

3.3. Non-response bias

Data was collected in different classes at different times, and students were also allowed to deliver the survey at later points in time, some responded earlier than others. To check for potential non-response bias, we followed a wave analysis [6], and tested for significant differences between early and late respondents. First, to ensure comparison between equally sized sub-samples, one observation from the male sample was randomly removed. Second, the early 101 male and 100 female respondents constituted the early response group, and the late 101 male and 100 female respondents constituted the late response group. Table 2 presents the analysis of mean differences between the groups with respect to age and general internet use patterns. Findings show no significant difference between the early and late respondents at 5% statistical significance. Thus, non-response bias is not a concern in this study.

3.4. Normality check

We checked for both multivariate and univariate normality using the Mardia and Shapiro-Wilk tests. However, in both the male and the female samples, the Mardia test (p-value <0.05) and the Shapiro-Wilk test (p-values <0.05) indicate non-normal distribution in all items. Accordingly, we used the Satorra-Bentler rescaling method (robust maximum likelihood) for both measurement and structural models' estimations using the lavaan package in R-software [93].

3.5. Measures

As the factors in our models are not directly and objectively

Table 2
Check for non-response bias.

	Mean first respondents	Mean last respondents	T	Df	P-value
Female					
Age	30.22	30.58	-0.447	196	0.655
Employment status	2.62	2.79	-0.501	197.47	0.617
Online Browsing	3.66	4.05	-1.843	191.49	0.067
Email	2.78	2.49	1.425	197.52	0.156
Networking sites	3.61	3.83	-0.966	197.51	0.335
E-commerce	2.23	2.15	0.434	197.49	0.665
Male					
Age	33.376	32.267	1.218	199.61	0.225
Employment status	2.277	2.693	-1.333	194.12	0.184
Online Browsing	3.861	3.574	1.336	199.65	0.182
Email	2.683	2.693	-0.048	199.84	0.962
Networking sites	3.713	3.732	-0.010	196.04	0.922
E-commerce	1.881	2.129	-1.4816	199.97	0.140

Female N = 200, Male N = 203.

measurable, we used multi-item measures from earlier studies, while adjusting relevant wording to the crowdfunding context. All items were piloted and tested in an earlier study conducted in Finland as part of a larger research project and data collection effort [99]. All items were adopted from relevant measures published earlier (see Table 3) and adjusted to the crowdfunding context. They were then subjected to review by twelve crowdfunding backers, and two platform managers. To further ensure clarity for the Ghanaian audience, they were also reviewed by two researchers of Ghanaian origin. All items were assessed based on a seven-point Likert scale ranging from 1 = “completely disagree” to 7 = “completely agree”. Table 3 presents in detail the latent factors used, their items, and the sources from which they were adapted. Following an exploratory factor analysis, we remove two items under perceived risk (RISK4, RISK5) and one item under prosocial orientation (PROM2) for either having low loadings (less than 0.5) or cross loadings on multiple factors.

3.6. Validity and reliability

To ensure reliability and validity of measures, further checks were conducted. Table 4 presents evidence for convergent and discriminant validity. First, reliability of the constructs was confirmed, as all Cronbach alpha values were above 0.70 [36]. The convergent validity of constructs was supported by the statistically significant factor loadings of measurement items at the 0.01% level (see Table 3). And discriminant validity was confirmed by the fact the average variance extracted (AVE) values for all factors were higher than 0.50, and all square roots of the AVE values (on the diagonal) are higher than the correlation coefficients among the factors [49].

Furthermore, based on the recommendation by Anderson and Gerbing [4], we conduct a confirmatory factor analysis (CFA) to examine the reliability and validity of the measurement scales used in the female and the male sample separately (see Table 3 for factor loadings). All fit indices meet threshold requirements as outlined by Hair et al. [57]. Here, both the comparative fit index (CFI) and the Tuck-Lewis index (TLI) exceeded the recommended minimum threshold of 0.90. Furthermore, the root mean square error of approximation (RMSEA) and the standardized root mean square residual (SRMR) values were below the recommended cut-off value of 0.08. Therefore, the measurement model is satisfactory for SEM analysis.

Table 3
Measurement items.

Construct	Measurement items	FL (Female)	FL (Male)	Source
RISK (Risk Perception)	RISK1 My privacy would be compromised on crowdfunding websites.	0.816	0.682	RISK1-2 adapted from "privacy" (in Internet use) from Vijayasathy (2004). RISK3 adapted from "perceived risk" (in mobile commerce) from Wu & Wang (2005). RISK4-5 adapted from "security" (in Internet use) from Vijayasathy (2004). RISK6 adapted from "perceived risk" (in mobile commerce) from Wu & Wang (2005)
	RISK2 Crowdfunding websites cannot be trusted to safeguard my privacy.	0.837	0.658	
	RISK3 I think using crowdfunding websites puts my privacy at risk.	0.887	0.650	
	RISK5 Using credit cards to pay for rewards and products on crowdfunding websites is safe.	Removed	Removed	
	RISK6 In general, making payments on crowdfunding websites is secure.	Removed	Removed	
	I think using crowdfunding websites in monetary transactions has potential risk.			
HOM (Homophily)	RISK6	0.841	0.608	HOM1-3 adapted from "homophily" (realted to SNS) in Chu & Kim (2011).
	HOM1 In general members of crowdfunding communities think like me.	0.942	0.868	
	HOM2 In general members of crowdfunding communities behave like me.	0.888	0.877	
SELE (Self-efficacy)	In general members of crowdfunding communities are like me.			SELE1-2 adapted from "knowledge self-efficacy" (towards eWoM) in Cheung & Lee (2012). SELE3-4 - own inspired by items under "Internet self-efficacy" in Hsu & Chiu (2004).
	HOM3	0.919	0.834	
	SELE1 I have confidence in my ability to support crowdfunding campaigns.	0.615	0.731	
	SELE2 I have the expertise needed to contribute to crowdfunding campaigns.	0.916	0.810	
	SELE3 I am confident in my ability to navigate and use crowdfunding platforms' websites	0.806	0.746	
PROM (Prosocial)	I am confident in my ability to contribute to campaigns through crowdfunding platforms' websites.			PROM1-3adapted from "moral obligation" (towards eWoM) in Cheung & Lee (2012)
	SELE4	0.891	0.911	
	PROM1 My conscience calls me to contribute to crowdfunding campaigns and communities.	1.042	0.931	
	PROM2 My decision to support crowdfunding campaigns and communities is fully in line with my moral conviction.	Removed	Removed	
SOC1 (Susceptibility to Social influence)	I feel morally obliged to contribute to crowdfunding campaigns and communities.			SOC1 adapted from "consumer susceptibility to interpersonal influence" in Bearden et al. (1989)
	PROM3	0.829	0.946	
	SOC11 It is important that others like the crowdfunding campaigns I support.	0.737	0.792	
	SOC12 I often identify with other people by supporting the same crowdfunding campaigns they support.	0.875	0.879	
	SOC13 When supporting crowdfunding campaigns I generally support those campaigns that I think others will approve of.	0.883	0.891	
	SOC14 If other people can see the crowdfunding campaigns I support, I often contribute to campaigns they expect me to support.	0.913	0.844	
	SOC15 I achieve a sense of belonging by supporting the same crowdfunding campaigns that others support.	0.769	0.860	
	SOC16 I consult other people to help choose the best crowdfunding campaign I should support.	0.816	0.838	
SOC17 To make sure I support the right crowdfunding campaign, I often observe what others are supporting.	Removed	Removed		

(continued on next page)

Table 3 (continued)

Construct	Measurement items	FL (Female)	FL (Male)	Source	
FCI (financial contribution intention)	SOCI8	I gather information from friends or family about crowdfunding campaigns I support.	Removed	Removed	
	FCI1	Given the chance, I intend to financially contribute to crowdfunding campaigns.	0.924	0.891	FCI1-3 adapted from "intent Pavlou (2003). FCI4-5 adapted from "intention to participate" in Algesheimer et al. (2005)
	FCI2	Given the chance, I predict that I would financially contribute to crowdfunding campaigns in the future.	0.962	0.925	
	FCI3	It is likely that I will financially contribute to crowdfunding campaigns in the near future.	0.967	0.944	
	FCI4	I have the intention to financially contribute to crowdfunding campaigns.	0.887	0.899	
FCI5	I intend to actively contribute to crowdfunding campaigns financially.	0.936	0.880		

Female model fit (N = 200): $\chi^2(237) = 419.410$, CFI = 0.957, TLI = 0.950, RMSEA = 0.062, SRMR = 0.058. Male model fit (N = 203): $\chi^2(237) = 379.969$, CFI = 0.959, TLI = 0.952, RMSEA = 0.055, SRMR = 0.045. All factor loadings are statistically significant at 0.01.

Table 4
Convergent validity, discriminant validity, and reliability.

Variables	Mean	SD	RISK	HOM	SELE	SOCI	PROM	FCI	Reliability(α)
Female									
Risk Perception (RISK)	5.070	1.525	0.715						0.91
Homophily (HOM)	4.462	1.783	0.053	0.84					0.94
Self-efficacy (SELE)	3.504	1.917	0.004	0.002	0.664				0.88
Susc. to Social Influence (SOCI)	3.774	1.920	0	0.037	0.16	0.696			0.88
Prosocial Orientation (PROM)	4.695	1.847	0.01	0.001	0.005	0.007	0.886		0.93
Fin. Contribution Intentions (FCI)	4.175	1.985	0.033	0.618	0.009	0.045	0.018	0.876	0.97
Male									
Risk Perception (RISK)	2.728	1.284	0.423						0.74
Homophily (HOM)	3.530	1.726	0.01	0.709					0.89
Self-efficacy (SELE)	5.301	1.436	0.078	0	0.644				0.88
Susc. to Social Influence (SOCI)	3.384	1.775	0	0.018	0.012	0.724			0.92
Prosocial Orientation (PROM)	3.535	1.970	0	0.033	0.02	0.426	0.88		0.94
Fin. Contribution Intentions (FCI)	3.346	1.913	0.022	0.019	0.139	0.001	0.003	0.824	0.96

Bold value on the diagonal represents the square root of AVE of the respective latent construct.

Reliability (α) is the Cronbach alpha value.

3.7. Common method bias

Collection of data using one method may result in a common method bias problem. Hence, we followed the suggested approaches by Podsakoff et al. [89] to check for common method bias in our data. First, we sought to establish mono-method variance using Harman’s single-factor test by creating a single factor with all measurement items without any rotation in an exploratory factor analysis. Second, to further ensure a more robust evaluation, we employed the CFA marker variable technique using a five-item construct of satisfaction with life. These approaches confirmed that common method bias was not an issue in this study as the average variance explained in all the approaches for both the male and the female samples were below the recommended threshold of 50%.

3.8. Structural path analyses

To compare two groups, we need to ensure the two groups are indeed comparable. Accordingly, we check for measurement invariance by achieving at least scalar invariance across the two groups [28]. This requires an estimation and comparison of model fit of three measurement models for each group in a multi-group CFA setting: configural model (a model without any constraints across groups), fixed loading model (equal factor loadings across groups) and a combined fixed

loadings and fixed intercepts model (equal factor loadings and equal item intercepts across groups). Table 5 presents the results of comparing these models’ fits indicating that both metric and scalar invariance of the measurement model were achieved in our samples.

To ensure gender differences with respect to the variables in our model, we first test for significance of differences in their means scores while assuming unequal variances, as reported in Table 6. Results indicate that females were associated with higher contribution intentions ($t(395.724) = -2.971$, $p = 0.003$), higher risk perceptions ($t(307.819) = -18.240$, $p = 0.000$), higher levels of perceived homophily ($t(390.111) = -3.651$, $p = 0.000$), higher levels of social orientation ($t(393.98) = -3.345$, $p = 0.001$), and lower self-efficacy ($t(367.425) = 7.548$, $p = 0.000$) than males. However, counter to expectations, levels of susceptibility to social influence were not significantly different among males and females ($t(391.863) = -0.390$, $p = 0.697$).

To test our hypotheses about differences in the relative strength of associations between variables in males and females we revert to a comparison of regression coefficients. Here, we estimate the hypothesized model separately for the male and the female groups. Both models returned satisfactory model fit criteria. The ratio of chi-square and degrees of freedom (1.75 for females and 1.53 for males) for both models are below 3. The CFI and TLI values are greater than 0.90. In addition, the RMSEA and SRMR values are below 0.08. The results are presented in Fig. 2a and b.

Table 5
Measurement invariance check.

	Df	AIC	BIC	Chisq	ΔChisq	ΔDf	P(>Chisq)
Scalar invariance							
fit.configural	430	28634	29304	703.94			
fit.loadings	447	28623	29226	727.03	21.835	17	0.191
fit.intercepts	464	28612	29146	749.31	21.706	17	0.196

Table 6
Equality of variance, and equality of means test.

Hypothesis	Variable	Sex	Mean	Std. Deviation	Levene's Test for Equality of Variances		t-test for Equality of Means			
					F	Sig.	Equal Variances Assumptions	T	Df	Sig. (2-tail)
H1a	FCI	Male	-0.145	1.030	0.453	0.502	Assumed	-2.968	397.000	0.003
		Female	0.149	0.948			Not assumed	-2.971	395.724	0.003
H1b	RISK Avoidance	Male	-0.668	0.514	37.402	0.000	Assumed	-18.359	397.000	0.000
		Female	0.685	0.910			Not assumed	-18.240	307.819	0.000
H1c	SELE	Male	0.350	0.807	20.407	0.000	Assumed	7.573	397.000	0.000
		Female	-0.359	1.052			Not assumed	7.548	367.425	0.000
H4	Homophily	Male	-0.177	1.059	2.641	0.105	Assumed	-3.644	397.000	0.000
		Female	0.182	0.903			Not assumed	-3.651	390.111	0.000
H6	PROM	Male	-0.163	0.956	0.039	0.843	Assumed	-3.347	397.000	0.001
		Female	0.168	1.018			Not assumed	-3.345	393.980	0.001
H8	SOC1	Male	-0.019	0.956	6.070	0.014	Assumed	-0.391	397.000	0.696
		Female	0.020	1.045			Not assumed	-0.390	391.863	0.697
Control	Age	Male	30.229	8.752	2.002	0.158	Assumed	-0.76	401.00	0.450
		Female	30.840	7.396			Not assumed	-0.76	391.94	0.449

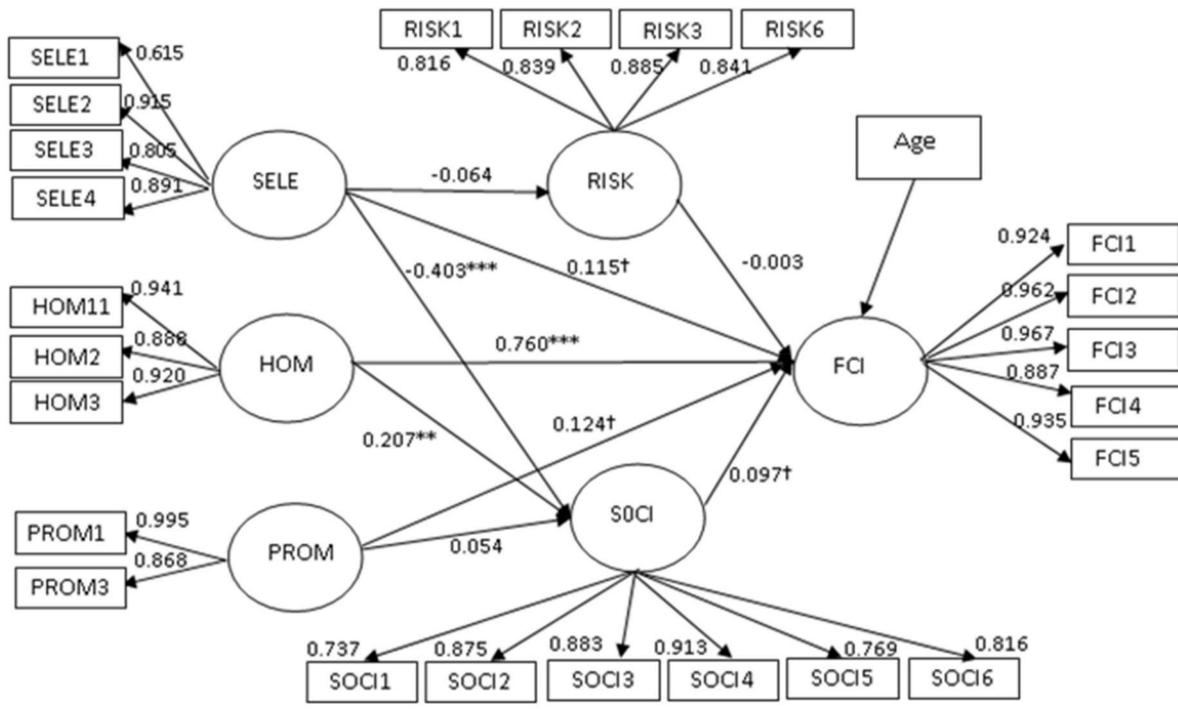
N = 202 male, N = 197 female.

Note that while standardized coefficients are reported in Fig. 2a and b, for between-group estimates and comparison of path coefficients, which are reported in Table 7, we used unstandardized coefficients in order to estimate the z-statistics while employing the equation below [32].

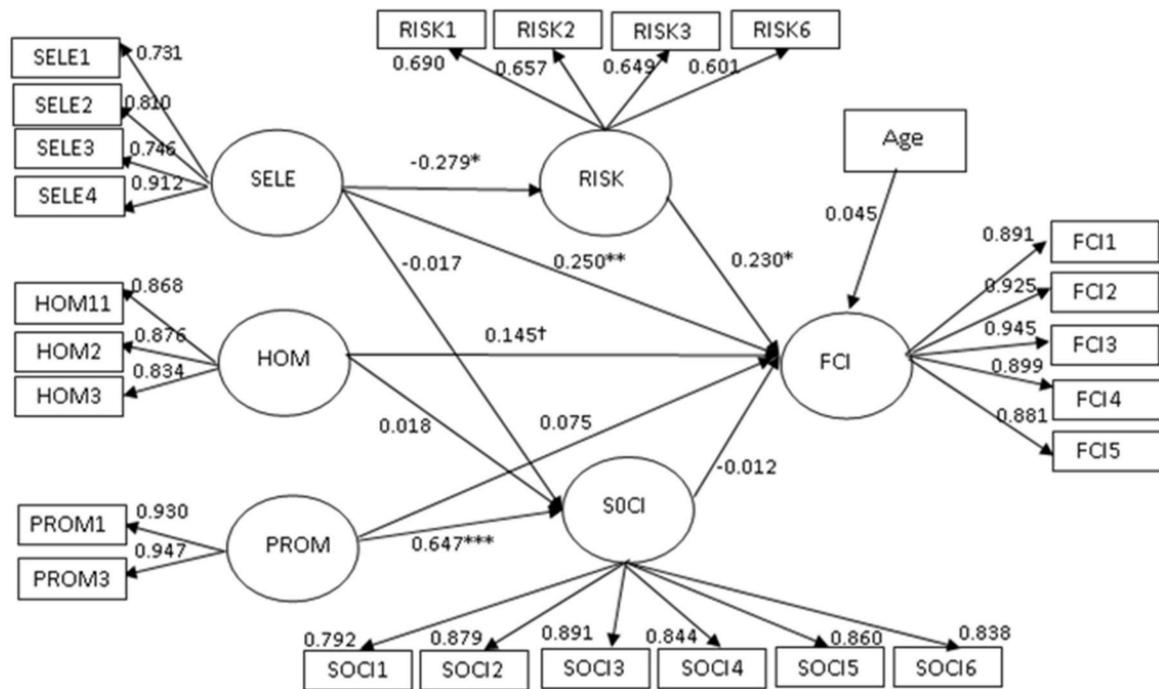
Table 7
SEM and between-group estimation results with controls.

Hypothesis	Regression path	Unstandardized beta (Female)	Unstandardized beta (Male)	ΔUnstandardized beta	Z-statistics (p-value)	Results
H1	RISK→FCI	-0.004 (0.062)	-0.511* (0.211)	-0.515	-2.242 (0.01)	Rejected. Stronger for males.
H2	SELE→FCI	0.172 † (0.089)	0.416** (0.12)	-0.244	-1.633 (0.051)	Confirmed. Stronger for males.
H3(a)	SELE→RISK	-0.066 (0.083)	-0.209* (0.09)	0.143	1.168 (0.088)	Weakly Confirmed. Stronger in males.
H3(b)	SELE→RISK→FCI	0.000 (0.004)	-0.107 (0.065)	0.065	0.107 (0.050)	Rejected. No mediation.
H4	HOM→FCI	0.795*** (0.058)	0.161 † (0.095)	0.634	5.696 (0.000)	Confirmed. Stronger in females.
H5	PROM→FCI	0.121 † (0.062)	0.069 (0.089)	0.052	0.479 (0.316)	Rejected. No gender difference.
H6	SOCI→FCI	0.125 † (0.073)	-0.013 (0.107)	0.138	1.065 (0.143)	Partially confirmed.
H7(a)	PROM→SOCI	0.041 (0.055)	0.551*** (0.082)	-0.51	-5.165 (0.000)	Rejected. Stronger in males.
H7(b)	PROM→SOCI→FCI	0.005 (0.007)	-0.007 (0.059)	0.012	0.202 (0.420)	Rejected. No mediation.
H8(a)	HOM→SOCI	0.168** (0.055)	0.018 (0.076)	0.15	1.599 (0.055)	Weakly Confirmed. Stronger in females.
H8(b)	HOM→SOCI→FCI	0.021 (0.013)	0.000 (0.002)	0.021	1.597 (0.055)	Rejected. No mediation.
H9(a)	SELE→SOCI	-0.466*** (0.092)	-0.026 (0.1)	-0.44	-3.238 (0.000)	Confirmed. Stronger in females.
H9(b)	SELE→SOCI→FCI	-0.058 † (0.034)	0.000 (0.003)	0.107	-1.699 (0.045)	Confirmed. Stronger in females.
Control	Age→FCI	0.013 (0.017)	0.012 (0.019)	0.001	0.039 (0.484)	

Female model fit (N = 200): $\chi^2(263) = 461.521$, CFI = 0.954, TLI = 0.948, RMSEA = 0.061, SRMR = 0.076. Male model fit (N = 203): $\chi^2(263) = 402.757$, CFI = 0.960, TLI = 0.955, RMSEA = 0.052, SRMR = 0.046. A positive ΔUnstandardized beta means higher path coefficient for females and vice-versa. Standard error in parenthesis. †p < 0.10, *p < 0.05, **p < 0.01, ***p < 0.001.



(a)



(b)

Fig. 2. (a) SEM estimation for female sample Female model fit (N = 200): $\chi^2(263) = 461.521$, CFI = 0.954, TLI = 0.948, RMSEA = 0.061, SRMR = 0.076. All values are standardized. (b) SEM estimation for male sample Male model fit (N = 203): $\chi^2(263) = 402.757$, CFI = 0.960, TLI = 0.955, RMSEA = 0.052, SRMR = 0.046. All values are standardized.

$$Z = \frac{\beta_1 - \beta_2}{\sqrt{(SE_{\beta_1})^2 + (SE_{\beta_2})^2}}$$

Where,
 β = unstandardized path coefficients.

SE_{β} = the standard error of β .

4. Results

We find that the positive direct effect of homophily on CCI is stronger

among females ($Z = 5.70, p < 0.001$), confirming H4. The positive direct effect of self-efficacy on CCI is stronger in males ($Z = 1.63, p < 0.05$), confirming H2. However, we find no gender differences with respect to the positive association between prosocial orientation ($Z = 0.48, p < 0.316$) and susceptibility ($Z = 1.07, p < 0.143$) with CCI. At the same time, when viewing each gender group separately, we find weak positive association between prosocial orientation and CCI ($\beta = 0.121, p < 0.1$) and between susceptibility and CCI ($\beta = 0.125, p < 0.1$) in females only, while no significant effects were documented in the male sample. Since the gender difference beta was above 0.1 with respect to susceptibility to social influence, we deem H6 as partly supported. Accordingly, since the gender difference beta for prosocial orientation was below 0.1, we deem H5 rejected. Furthermore, and surprisingly, we find that risk perceptions are more strongly and negatively associated with CCI in males than in females ($Z = -2.24, p < 0.01$), hence, also rejecting H1.

Furthermore, while we do find a weakly significant stronger negative association between self-efficacy and risk perceptions in males ($Z = 1.17, p < 0.088$), and thus weakly support H3(a), we do not find evidence that risk perception mediates the effects of self-efficacy on CCI in either males or females. Here, we find a significant difference between two non-significant effects. Hence, rejecting H3(b) overall.

We find that the negative association between self-efficacy and susceptibility to social influence is stronger in females ($Z = -3.24, p < 0.000$), hence confirming H9(a), and the latter also exerts a significantly stronger mediation effect between self-efficacy and CCI in females ($Z = -1.7, p < 0.05$), hence confirming H9(b). Next, there is a weakly significant positive direct effect between homophily and susceptibility in females ($Z = -1.6, p < 0.055$), weakly confirming H8(a), but susceptibility does not mediate the effect of homophily and CCI in both gender groups, hence rejecting H8(b). Finally, we find that direct positive effect between prosocial orientation and susceptibility to social influence is stronger in males rather than females ($Z = -5.17, p < 0.000$), rejecting H7(a), and that susceptibility does not mediate the effect of prosocial orientation on CCI in either males or females, rejecting H7(b).

5. Discussion

The current study aims at identifying the ways in which gender influences CCI. It does so by examining gender differences in the extent to which different cognitive antecedents influence CCI. Taken together, our findings are aligned with the view that males are more likely to exhibit an internal locus of control and need for challenge, while females are more likely to exhibit an external locus of control and need for affiliation [96]. And these needs have implications for CCI. Nevertheless, we find both support and challenge to common assumptions about effects of gender in financial decision making.

First, in the case of males, we find that self-efficacy exerts a significantly stronger effect on CCI and that risk perceptions exerts a significantly stronger negative effect on CCI than in females. The first finding aligns with expectations and related findings from earlier research in non-crowdfunding financial behavior contexts [13,47]. And, in this respect, our study contributes to existing knowledge by confirming the applicability of this gender effect also in the context of crowdfunding backers.

However, the second finding challenges our expectations. Here, earlier research has documented stronger risk aversion among females across a variety of financial investment and contribution contexts [97], including crowdfunding [59,85], which stands at odds with our findings. One possible explanation for this contradictory finding may lie in the context of reward crowdfunding. Earlier research has mostly studied this effect in the context of investments in stock trading and equity crowdfunding, while our study is conducted in a non-investment context of reward crowdfunding. In such context, genders may differ in their reward expectations from making contributions. Earlier research shows that, when allocating resources, women are more oriented towards relations and are concerned with community success, while males are

more oriented towards agentic competitive success and achievement [20,65]. Accordingly, females may view reward crowdfunding as more congruent with their values, where the support for others is satisfying in itself (i.e., 'love money'), whereas males may be more concerned with actually getting the pre-purchased product than with nurturing relations, and hence perceive the activity as riskier.

Nevertheless, in line with expectations, we do find evidence that males' higher levels of self-efficacy are significantly associated with lower perceptions of risk. This finding aligns with earlier research suggesting that higher confidence in males decreases their perceptions of risks or enhances their willingness to take more risk [13,37,87].

Second, with respect to females, we show that homophily exerts a significantly stronger association with CCI than in males. This is in line with findings highlighting the special role played by gender-based homophily in females' crowdfunding investments and backing behavior [41,53,109]. However, based on our measure of homophily, we show that females act upon perceived homophily with the crowdfunding community as a whole, and not only with its female members. Such homophily highlights alignment between females' empathy, principle of care, and greater concern for others [20,64] and the values of a crowdfunding community created specifically for supporting its members.

Furthermore, with respect to effects of prosocial orientation our findings require closer examination. On the one hand, we find weakly significant association between prosocial orientation and CCI in females, and non-significant association with CCI in males. However, on the other hand, we also find no statistically significant difference in the strength of this association between males in females. Taking into consideration the low gender difference beta value, we conclude with rejecting our hypothesis. In this respect, our findings suggest no gender difference in the extent to which prosocial orientation is associated with CCI. This somewhat contradictory finding to earlier studies may be related to the concepts employed. Studies that did find prosocial orientation effects examined 'other orientation' [117] and altruism [95] rather than prosocial orientation per se. Accordingly, this may suggest that our findings differ due to the use of related yet different concepts when examining gender differences.

Finally, we also find a weakly significant association between susceptibility to social influence in females, and non-significant association with CCI in males. Here, while technically we do find a non-significant gender difference in the extent to which susceptibility associates with CCI, the fact that the gender difference beta value is above 0.1, and the association is weakly significant only in women, may suggest that such effect may still be evident and could be better captured through use of even larger datasets. This weak significance may be attributed to higher degrees of masculinity in Ghanaian culture [61], which put premium on assertiveness and power [60], thereby constraining susceptibility to social influence in both genders. Regardless, to the best of our knowledge the current study is the first to provide insights into the role of susceptibility to social influence among females in crowdfunding contribution research.

6. Conclusions

The current study examines the way in which gender differences influence contribution intentions in crowdfunding. It does so by showing gender differences in the extent to which different cognitive antecedents exert influence on CCI. Following a social feminist approach, we identify and suggest critical elements that may serve as cognitive antecedents of intentions, following consistent documentation of their variance across genders in different contexts of study. Our findings present both support and challenge to existing preconceptions. Specifically, we show that self-efficacy and risk perception exert stronger effects among males than females, and that perceptions of homophily exert stronger effects among females. In addition, we also find weak support for an effect of susceptibility to social influence in females only, while finding no gender

differences with respect to the effect of prosocial orientation.

As such, our study presents several contributions. First, we propose and test a novel gender-based model explaining CCI, acknowledging gender's role as influence rather than a control variable [1,80,98]. Specifically, our model brings together the most pervasive of gender differences as collected from the broader research at the intersection of gender and finance, and tests them as part of a common single model. Furthermore, not only are we outlining an integrative theoretical model we also empirically test it. Second, while earlier research has mostly focused on examining gender differences from the fundraiser/entrepreneur perspective, we examine them from the less frequently studied funder perspective. Third, we do so while answering calls for greater use of primary data in crowdfunding research directly from relevant people (unlike frequently used scrapped platform data), as well as for research in understudied developing market [88,101] and African markets in particular [27]. Fourth, our findings present new, sometimes surprising, evidence on differences in the extent to which self-efficacy, risk perception, homophily, and susceptibility to social influence affect CCIs differently among males and females that both supports and challenges earlier findings in other contexts. Such insights are only possible thanks to the joint testing of hypotheses that are often tested separately in different studies, while using primary data, from a unique context that is characterized by extreme gender inequality.

6.1. Implication for research

Our study presents several implications for research. First, emerging from the findings is the evidence for the need to include gender differences in crowdfunding backer intentionality studies, as we provide compelling evidence that different antecedents exert different influence on contribution intentions among males and females. This may be achieved by the inclusion of gender as moderator in models explaining backer intentions, or through conscious interpretations of findings considering gender distributions in studied samples.

Second, while presenting interesting insights our study has limitations that may inform future research efforts. One effort may be directed towards testing the boundaries of generalizability of our findings by exploring them in different national contexts characterized by different institutional environments, prevalent levels of gender inequality, as well as different crowdfunding industry maturity levels. Similarly, generalizability may be tested with respect to applicability to other models of crowdfunding practice, such as equity, lending, as well as non-investment activities in donations.

Our study also does not control for potential impacts of contextual factors such as regional differences which may affect socialization processes directly linked to the ability and interest of males and females to engage in crowdfunding. While our sample of students does reflect people from different parts of the country, and hence not biased regionally, we did not collect data about regional origin. Accordingly, future studies may explore potentialities for regional differences and especially in urban versus rural areas, more versus less affluent areas, as well as regions that are culturally homogenous versus heterogenous.

A different direction for future research may be following an inductive rather than a deductive research approach. Here qualitative research aiming to reveal differing explanations and narratives through content analysis of backer interviews, may be able to both flesh out new antecedents of CCI that may differ between genders, as well as provide explanations to the existence and non-existence of gender differences as identified in the current research.

6.2. Implications for practice

Our findings may also suggest several implications for crowdfunding platforms, community organizers, and campaign promoters. First, stakeholders that may wish to leverage the positive effects of homophily on contribution intentions, especially among female users, may seek to

invest in developing community enhancement features that allow for more interaction among members along a more diversified range of exchanges. Furthermore, in platform user and community members' recruitment and retention efforts, stakeholders may use narratives highlighting values of care, empathy, and relationships that appeal to females in their marketing communications, and community codes of conduct documents.

On the other hand, when wishing to leverage the positive effects of self-efficacy on contribution intentions, as well as when recruiting and retaining male users, platforms and community organizers may seek to invest in confidence boosting features as well as the use of narratives highlighting competence and achievement in marketing communications aimed at male segments. At the same time, these efforts should strike a balance between triggering male participation through invitations to a challenge, and the avoidance of underestimating related risks. The latter may be achieved using risk disclosures and user qualification checks.

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Declaration of competing interest

No conflict of interest for any of the authors.

Data availability

Data will be made available on request.

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