

On Why Women-Owned Businesses Take More Time to Secure Microloans

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Abstract

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Plain English Summary

It takes women longer than it takes men to get the same business loan on kiva.org because (1) women choose bigger loans, (2) women ask for more time to pay back their loans, and (3) because lenders prefer lending to men-owned businesses. Thus, our data suggests that lenders prefer men-owned businesses partially because men make choices about loans that lenders prefer—men choose smaller loans and ask for less time to pay back the same loan.

Keywords: gender, kiva, microfinance, risk, time

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1. INTRODUCTION

The role of gender in resource mobilization has been a topic of extensive research, policy concern, and public debate for some time (Bullough et al., 2017; Bullough & Renko, 2016; Madill et al., 2006; Uzuegbunam & Uzuegbunam, 2018). A considerable part of this debate centers around approaches to mobilizing financial, social, human, and other capital (Clough et al., 2019; Drover et al., 2017; Zhang et al., 2010). Coleman and Robb (2012) and Robb and Coleman (2010) have further emphasized the nuanced roles of financial capital and motivations in these gender-based disparities. While much of the existing literature on gender differences in resource mobilization has focused on the disparities in the amounts raised by women-owned businesses compared to those owned by men, this article shifts the lens to another crucial dimension: the *time* taken to raise debt capital. Although we have made great progress to better understand how gender affects the capacity to mobilize various forms of capital (Cruz Rambaud et al., 2022), a broader picture remains unclear, especially when considering the strategic financial decisions made by female entrepreneurs as highlighted by Robb and Coleman (2010).

Within the context of entrepreneurship, the time dynamics associated with reaching a funding goal are pivotal. The duration to secure funding not only mirrors the equilibrium between a borrower's urgent requirements and a lender's propensity to invest but also has profound economic implications. As Ngah-Kiing Lim et al. (2009) posited, the time taken to receive and repay a loan can have significant economic repercussions for both parties involved—independent of the final amount of capital mobilized. For instance, lengthy fundraising rounds can limit a borrower's liquidity, potentially curtailing alternative investments or personal expenditures. Delays in achieving funding objectives can further strain a borrower's financial situation, jeopardizing the timely realization of their ventures.

While time is a critical component of business success and survival, the study of time remains in its infancy in the business funding context (Kotha et al., 2022; Lévesque & Stephan, 2020; Wood et al., 2021, 2021). A pivotal, yet often overlooked element within this domain is the duration to achieve funding goals. Time, in the business funding context, is multifaceted and extends beyond mere chronology. As highlighted by Wood et al. (2021), it encompasses a variety of components, from loan payback periods to strategic decisions that influence the course of achieving those financial goals. In this study, we delve deep into understanding this temporal dimension, emphasizing its role in gender-driven funding disparities within the realm of microlending. We thus leverage gender as a pivotal independent variable, as it unveils both lender perceptions and borrower behaviors; specifically, we anticipate female borrowers to exhibit greater risk aversion compared to their male counterparts, and we posit that lenders differentiate their loan terms based on gender-driven perceptions, potentially leading to disparities in time to reach a funding goal.

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While existing literature has made strides in addressing gender's influence on funding capacity, the comprehensive picture remains elusive. Time is not just a measure of business survival and success but also an economic choice influenced by lender perceptions and borrower strategies. Coleman and Robb (2012) have highlighted that the strategies and motivations behind financial decisions can vary significantly based on gender, further complicating the landscape. Particularly in the microlending context, aspiring borrowers face differences in the amount of time to reach a microloan funding goal, which is based on the borrower's decisions and on the lender's perceptions of a borrower's surface-level characteristics (e.g., gender). We thus consider both lender- and borrower-driven explanations for the differences in time for women- and men-owned businesses to reach a microloan funding goal. Because most societies stereotypically perceive men as being assertive, dominant, and risk-taking (Powell et al., 2002), and since entrepreneurs are associated with these characteristics, men are more likely to garner investor interest and support than are women (Balachandra et al., 2019; Bigelow et al., 2014; Grossman et al., 2012). The time to reach a microloan funding goal can also be influenced by borrower's risk preferences (e.g., for a requested repayment duration and for a requested loan amount). Risk preferences are about recognizing that choices made at a given time influence future possibilities. Decision theory suggests that particular risk preferences between women and men lead to differences in decision-making (Charness & Gneezy, 2012; Hoskisson et al., 2017; Sarin & Wieland, 2016), and as such female business owners may adopt different financial strategies, relative to male business owners, leading to differences in the time it takes to reach a microloan funding goal. Hence, we address the following research questions: *Does the time taken for female business owners to reach their microloan funding goal differ from that of male business owners? And do business owners' decisions regarding the size and repayment schedule of these microloans account for this difference?*

Although empirical evidence points to gender differences in capital mobilization, the sources of these differences are difficult to directly observe and disentangle. For instance, when women borrowers are disadvantaged, it is unclear whether the source of the disadvantage can be explained by gender discrimination and, if it can, to what extent, particularly when the lenders are themselves women (Carter et al., 2007). Crowdfunding, especially *crowdlending*, offers a unique lens to observe gender differences in business resource mobilization, avoiding biases like left-truncation seen in traditional funding data sources, and addressing simultaneity concerns present in traditional data. Furthermore, crowdlending platforms like Kiva provide invaluable data on capital resource mobilization in developing countries and among marginalized entrepreneurs, addressing the western bias prevalent in much of social science research.

The theoretical *interplay* between lender- and borrower-driven decisions allows us to explore how immutable borrower characteristics (i.e., business-owner's gender) and lender decisions (e.g., loan payback length), which themselves are influenced by immutable borrower characteristics, affect time-based

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outcomes. We leverage research on gender differences in risk preference to explore how borrower-driven choices regarding the size and repayment schedule of business microloans may account for the time to reach these microloan funding goals. We rely on gender role congruity theory, which posits that gender differences in successful access to capital persist as a result of lender stereotyping (Gupta et al., 2009; Nitani et al., 2020), to examine the lender-driven outcome of the time taken to reach such goal. Considering gender differences in risk preferences, we develop arguments about why female business owners request larger microloans and more time to repay these loans than their male counterparts, and how this leads to a longer time for women-owned businesses to reach their microloan funding goals relative to men-owned businesses.

We test our hypotheses on a sample of 294,071 microloans funded on Kiva, the world's largest crowdlending platform supporting marginalized entrepreneurs. The platform design features a category 'tag' that allows researchers to identify the gender of borrowers and whether the microloan is for business or personal use. Compared to studies on equity- and reward-based crowdfunding, the conclusions about gender differences on debt-based crowdfunding have been much less clear. One possible explanation for this inconclusiveness, which we address, is that research exploring gender-based differences in the context of microlending assumes no differences between personal and business microloans, and thus does not differentiate between the two in data analysis¹. Considering that roughly four out of five Kiva borrowers are women, but less than one out of four Kiva borrowers are female business owners, differentiating between personal and business microloans is deemed important.

Our study complements the literature on gender in business and on crowdlending (Caliendo et al., 2015). Specifically, we add to the study of gender in business by exploring gender differences in risk preferences and in strategic decisions that impact the length of time it takes for borrowers to reach their crowdlending loan targets. Our findings suggest that women-owned businesses are expected to face a longer time to reach their funding goal than men-owned businesses, and that women-owned businesses are expected to seek larger microloan funding amounts and request a longer microloan repayment duration, all additional factors that explain why women-owned businesses experience more time to reach their funding goals. Studies about gender in business tend to focus on differences in the amount of capital raised by men and women. We add to this literature by exploring time as another outcome. Moreover, Kiva's unique context enables us to observe pre-microlending decisions, which allows us to add to the crowdlending literature by exploring gender and the associated differences in risk as it relates to the time

¹ For instance, see Allison et al. (2015) who study the effect of Kiva borrowers' linguistic cues on fundraising outcomes, Anglin et al. (2019) who investigate the role of microfinance institutions in crowdlending performance, or Moss et al. (2015) who study the effect of microlending narratives as signals of Kiva borrowers' behavioral intentions.

to reach a microloan funding goal. We also highlight strategic trade-offs (e.g., larger funding goals versus longer time to reach these goals) that borrowers make to manage how their microloans are crowdfunded.

2. GENDER DIFFERENCES IN MOBILIZING BUSINESS RESOURCES FROM THE CROWD

Gender has played an important role in business resource accessibility. This area of research spans differences between men and women in regard to the mobilization of angel investor resources (Becker-Blease & Sohl, 2007), venture capitalists (Balachandra et al., 2019; Kanze et al., 2018), banks (Buttner & Rosen, 1988; Carter et al., 2007; Eddleston et al., 2016), microlenders (D'Espallier et al., 2011; Quigley & Patel, 2022), and government organizations (Malmström et al., 2017). The underlying gender differences in the capacity to mobilize resources are varied (Jennings & Brush, 2013). Examples of these gender differences include loan application requirements (Carter et al., 2007), interest rates charged (Z. Wu & Chua, 2012), documentation requirements to obtain financing (Constantinidis et al., 2006; Murphy et al., 2007), and bank financing standards (Eddleston et al., 2016), to explain how women and men differ in mobilizing business loans.

The emergence of crowdfunding platforms has substantially changed the structure of how individuals can acquire business resources (Calic & Mosakowski, 2016; Gafni et al., 2019; Mollick, 2014; Murray et al., 2020) and has thus raised new questions about the role of gender in online resource mobilization (Geiger & Oranburg, 2018; Greenberg & Mollick, 2017; Kuppuswamy & Mollick, 2016). Crowdfunding research has begun to explore the effect of gender on resource mobilization in reward-based (Johnson et al., 2018), equity-based (Geiger & Oranburg, 2018), and debt-based (Bhuiyan & Ivlevs, 2019) crowdfunding. While crowdfunding has closed some of the gaps in resource mobilization performance between women and men, the extent to which these differences persist depends on the type of crowdfunding examined. Reward-based crowdfunding platforms, on which individuals solicit funding in return for a product or service (i.e., a reward), have not just closed the resource-mobilization gap between men and women, but reversed it (Gafni, Marom, et al., 2021; Greenberg & Mollick, 2017; Johnson et al., 2018). On the other hand, while there are fewer gender differences in resource-mobilization on equity-based crowdfunding platforms, on which company securities are privately offered, differences between men and women reaching funding goals persist (Cumming et al., 2019; Geiger & Oranburg, 2018; Mohammadi & Shafi, 2018).

Exploring how equity-based crowdfunding affects business finance, Cumming et al. (2019) find that while younger and more geographically remote business owners are more likely to participate and successfully raise funds in equity-based crowdfunding than they are for initial public offerings (IPOs), the authors find no such evidence for women and minority businesses. Geiger and Oranburg (2018) find that

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women-owned businesses receive less overall investment. Moreover, the authors observe an interaction between the amount of funding and gender, such that the likelihood of women reaching their funding goal decreases proportionally to the requested funding amount. In studying equity-based crowdfunding on FundedByMe, a Swedish platform, Mohammadi and Shafi (2018) find that women investors are both more risk-averse and more likely to invest in businesses led by men, replicating men's investment choices. While Mohammadi and Shafi's (2018) findings are replicated in the context of a French equity-crowdfunding platform, WiSEED (Hervé et al., 2019), Mohammadi and Shafi's (2018) findings do not find support from a sample of UK equity-based crowdfunding businesses launched on the Seedrs platform. Vismara et al. (2017) find more women investor and business participation in equity-based crowdfunding than in traditional forms of finance.

Scholarly work suggests that women may be advantaged in reward-based crowdfunding (Gafni, Marom, et al., 2021; Greenberg & Mollick, 2017; Johnson et al., 2018). Johnson et al. (2018) find that women mobilize more capital on reward-based crowdfunding platforms than men because of stereotypical beliefs that women are more trustworthy than men. Greenberg and Mollick (2017) also find that women mobilize more capital than men, but suggest this is because reward-based crowdfunding platforms have larger female and activist funder participation than traditional forms of funding. Moreover, Greenberg and Mollick (2017) find support for the concept of activist choice homophily, in which individuals support others whom they perceive as sharing a structural barrier (e.g., discrimination) stemming from a common social identity (e.g., gender, sexual preferences, and ethnic heritage) as an explanation for better performance of women on Kickstarter's reward-based crowdfunding platform. Also drawing from Kickstarter data, Gafni, Hudon, et al. (2021) observe that women are more likely to reach their funding goal than men and that each concentrates in stereotypical sectors (e.g., 85% of all Comics projects were launched by men and 77% of all Dance projects were launched by women).

Scholarly findings about gender differences in resource mobilization are much less clear in the literature on debt-based crowdfunding or, equivalently, crowdlending, than they are in the literatures on reward- and equity-based crowdfunding. Unlike reward- and equity-based crowdfunding, which are focused on resource mobilization for *business* purposes², debt-based crowdfunding is primarily used to mobilize financial resources for *personal* purposes, such as tuition payments, emergency care, car and motorcycle financing, credit refinancing and debt consolidation, home improvements, and special occasion financing (e.g., weddings, honeymoons, and exotic vacations) (see, e.g.,

² For instance, the equity-based platform AngelLists "is a platform for startups" (<https://angel.co/about>) while the reward-based platform Kickstarter's mission "is to bring creative projects to life" (<https://www.kickstarter.com/about>). For comparison, Kiva's mission is "to expand financial access to help underserved communities thrive" (<https://www.kiva.org/about>).

<https://www.prosper.com/loans/loan-types/wedding-loans/>). On Kiva, 76% of all issued microloans are for personal purposes. Moreover, important gender selection effects are found by microloan type, with personal microloans strongly biased toward women borrowers. While women constitute 83% of all Kiva borrowers³, women-owned businesses make up only 24% of business borrowers. To date, microlending research exploring gender differences has assumed no differences between personal and business microloans.

A study of crowdlending from Prosper, a U.S. crowdlending platform focusing on personal loans, indicates that women are more likely (14%) to default than men, but have a slightly better chance (1.1%) of getting funded than men (Pope & Sydnor, 2011). In a study of physical discrimination based on photographs posted on Kiva, Jenq et al. (2015) confirm earlier findings that lenders discriminate against borrowers based on age, gender, physical attractiveness, physique, and skin color. Younger, female, more attractive, lighter-skinned, and more physically fit borrowers are more likely to reach their microloan funding goal, and to reach it faster (Pope & Sydnor, 2011). Supporting these findings, Ly and Mason (2012) and Heller and Badding (2012) observe that women borrowers on Kiva are funded faster than their male counterparts. Barasinska and Schäfer (2014) could not replicate these findings based on data from Smava, a German-based crowdlending platform; they found no significant differences in funding between women and men. Findings from a Mexican crowdlending context generally replicate findings from Smava data, but not from Kiva (Canfield, 2018). In the Mexican sample, women were not more likely to get funded or default than were men, which is consistent with default rates on Kiva (our findings). However, women continued making microloan payments for much longer (9.2 months) before defaulting than did men (5.4 months). Lower crowdlending default rates among women, compared to men, are also found in the context of Yooli, a Chinese crowdlending platform (Lin et al., 2017). It is important to note that the above microloan studies do not separate business from personal loans, but instead sample all loans over a particular period in time.

In separating *business* from *personal* microloans on Kiva, we add to an examination of gender differences in crowdlending for businesses by arguing that (1) women-owned businesses face a longer timespan to reach their funding goal for a microloan relative to men-owned businesses, (2) women-owned businesses adopt different strategies about the size and repayment duration of their business microloans relative to men-owned businesses, and (3) the strategies adopted by women-owned businesses about the size and repayment duration of their business microloans partially explains the longer time female business owners face to reach their funding goal.

3. THEORETICAL BACKGROUND AND HYPOTHESES

³ <https://www.gender.kiva.org>

3.1. Gender differences in ‘time to reach a microloan funding goal’: A lender-driven explanation

Strategies about time are particularly relevant in debt financing because the time to receive funding and the time to repay a loan represent crucial economic consequences for both the lender and borrower (Nghah-Kiing Lim et al., 2009). For instance, a borrower’s early repayment of a loan reduces the level of cash available for other activities, such as alternative investments (Cuervo-Cazurra & Annique Un, 2010) or personal consumption (Fan & White, 2003). To develop our arguments about gender differences in the ‘time to reach a microloan funding goal’, we draw on the debt financing literature.

Most of the resource mobilization literature supports the gender role congruity theory, which suggests that gaps in access to debt exist between men and women as a result of gender stereotypes (Alesina et al., 2013; Eddleston et al., 2016; Fay & Williams, 1993; Gupta et al., 2009; Nitani et al., 2020; Quigley & Patel, 2022; Stefani & Vacca, 2013). According to role congruity theory, bias against a particular social group arises from the relationship that individuals perceive between the characteristics of a social group and the social roles that members of that social group aspire to occupy (Eagly, 2004). For instance, role congruity theory posits that bias against an aspiring female political leader occurs because of the incongruities between the stereotypical characteristics associated with women (e.g., not natural leaders, unable to handle large responsibilities, are weak physically, intellectually, and emotionally) and the stereotypical characteristics associated with leaders (e.g., naturally take charge, are fearless, and can readily handle major responsibilities, particularly in the face of opposition). This bias about women’s leadership abilities prompts society to view women as lacking the requirements for success in a particular role, such as leadership roles (Eagly & Karau, 2002). Thus, when the stereotyped members and an inconsistent social role are jointly perceived, this incongruence lowers the evaluation of a member of that social group as an occupant or potential occupant of that role (Eagly & Karau, 2002). While gender egalitarianism practices of certain cultures reduce gender bias (Quigley & Patel, 2022), in general, bias against women-owned businesses stems from the inconsistency that many societies perceive between the characteristics of women and the requirements of business owners (Eddleston et al., 2016). Furthermore, gender stereotypes may be largely independent of the perceiver’s gender, such that women are as likely to negatively stereotype women as are men (Carter et al., 2007; Mohammadi & Shafi, 2018).

The source of bias that results in a lender’s preference to allocate debt to a man rather than a woman can be explained by a variety of factors. Fay and Williams (1993) find that loan officers in New Zealand believe that a university education is an important factor in their lending decision for women, but not for men. The authors also find that women with masculine sex-role attributes, such as professional achievement, a dominant personality, and an aggressive personality, and women with fewer feminine attributes, such as nurturance and caring, were more likely to have their loan funded. In an Italian sample

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of business owners, Alesina et al. (2013) find that women have to pay more for credit than men, even when women and men have identical credit and risk-taking histories, and other relevant ratings of creditworthiness.

Moreover, Eddleston et al. (2016) find that lenders reward the business characteristics of women- and men-owned businesses differently, to the disadvantage of women. Specifically, women receive lower funding amounts as a result of lenders' legitimacy concerns in the masculine domain of business ownership (Gupta et al., 2009) because lenders devalue the positive signals of viability (age of a business) and commitment (hours worked per week) for women seeking financing compared to that of men. Lenders' gender preferences also appear across countries. Stefani and Vecca (2013) find gender-based differences in bank loans awarded to the disadvantage of women-owned businesses in Germany, Italy, and Spain. Thus, women's access to debt financing is restricted because lenders draw on gender-based expectations of men and women to make debt allocation choices. Because men are expected to display masculine characteristics stereotypically associated with business leadership (e.g., strength, confidence, bravado, aggressiveness), they are more likely to garner more lender interest than are women (Balachandra et al., 2019; Eddleston et al., 2016).

Following the gender role congruity theory, we hypothesize that women-owned businesses will anticipate more time to reach their microloan funding goals relative to men-owned businesses. We can extrapolate from previous research that if, in any given time period, lenders' funding preferences advantage men and disadvantage women, then women will take longer than men to reach their funding goal. By focusing on crowdlending campaigns where a borrower's gender is prominently presented to lenders on a single Internet platform, we can explore differences in lenders' preferences in a setting where non-gender factors of the microloan pitch are relatively homogenous or can be reasonably accounted for using control variables. Formally,

Hypothesis (H1). *Women-owned businesses take longer to reach their microloan funding goals relative to men-owned businesses.*

3.2. Gender differences in microlending structure: A borrower-driven explanation

The length of time a business takes to reach its funding goal can be partially explained by decisions about the microloan structure—requested loan amount and repayment duration—and we thus develop a borrower-driven explanation for gender differences in such a structure. We argue that differences in risk preferences lead to borrower strategies about microlending structure, whereby female business owners request *larger microloans* and *more time to repay* these loans relative to male business owners. Our arguments below demonstrate that borrower choices about microlending structure operate in addition to the lender biases described above, such that decisions by female business owners further increase the difference in

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the time women-owned businesses face to reach their microloan funding goal relative to men-owned businesses. These relationships are graphically presented in Figure 1, which suggests that the lender-driven explanation directly impacts the longer time that women face in reaching their goals relative to male business owners, and that borrower's choices further increase the time to reach these goals. Using this framework, we can differentiate lender-driven from borrower-driven gender effects.

----- INSERT FIGURE 1 HERE -----

Most people exhibit risk aversion in economic decisions (Wang et al., 2016). For instance, when individuals experience high discount rates for future events (e.g., investment returns), they exhibit risk aversion (Laverty, 1996). As a concrete example, when college students were presented with a choice between an immediate prize and a fixed prize in the future, all students exhibited a high cost of waiting; Thaler (1991) calculated average discount rates between 12 and 277 percent for the future prize, dependent on the amount of the prize and the waiting duration. Decisions about business finance are fundamentally rooted in an individual's risk preference (Heaton, 2019).

Empirical evidence is broadly consistent about gender differences in perceptions about risk. Women tend to avoid financial risks relative to men (Borghans et al., 2009; Byrnes et al., 1999; Caliendo et al., 2015; Sapienza et al., 2009; Sarin & Wieland, 2016). In a sample of single-person U.S. households, Jianakoplos and Bernasek (1998) find that, on average, single women hold lower risk investment portfolios than single men (single-person households were studied to rule out ambiguity about which partner, and thus which gender, made the investment portfolio decisions). Experiments corroborate the above findings. Assembling data from 15 independent studies using an investment game, Charness and Gneezy (2012) find that men seek more financial risk than do women. What makes their findings particularly reliable is that most of the experiments were not designed to investigate gender differences and were conducted by different researchers in different countries with different durations, payoffs, subject pools, and instructions. Gender differences in risk preferences for women-owned, relative to men-owned, businesses corroborate the individual-level studies. Ghanaian female business owners tend to reduce risk relative to their male counterparts (Boohene et al., 2008). Likewise, using the 2011 Global Entrepreneurship Monitor database comprised of 12,828 entrepreneurs from 44 countries, Yu and Chen (2016) find that female business owners take less risky business decisions than do their male counterparts. Thus, observational and experimental evidence generally finds gender differences in risk preferences, whereby women tend to, on average, reduce financial risks relative to men.

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The propensity of women to reduce business risk has, in some circumstances, portrayed women as ‘underconfident’⁴ (Jennings et al., 2021). Suggestions that women are underconfident are possibly the result of the confidence baseline against which women are measured. As a concrete example, Forbes’ (2005) highly cited article on overconfidence is based on a sample that is 82 percent male, and Camerer and Lovallo’s (1999) seminal article on overconfidence relied exclusively on male subjects⁵. In fact, Jennings and Brush (2013) estimate that only 10 percent of all entrepreneurship research includes or studies women. Recent research has called underconfidence into question, suggesting instead that women are more likely to be *unbiased* than are men, who are more likely to be susceptible to overconfidence bias (Jennings et al., 2021).

Together, these studies broadly suggest that men and women view risk differently. As women tend to reduce risks relative to men (Charness & Gneezy, 2012), we expect female business owners to adopt different microlending structures relative to male business owners. *Microloan funding goal* and *repayment duration* constitute important decisions about microlending structure that have a real economic impact on the viability of a business (Anglin et al., 2020) and thus carry significant risk potential. For instance, our argument suggests that female business owners are more likely to place a relative premium on decisions that reduce risk of business default, preferring decisions that support the long-term survival of the business. We elaborate on these rationales and how they can lead female business owners to request larger microloan funding goals and longer microloan repayment durations.

In debt finance, Cuervo-Cazurra and Un (2010) find that loan size and time to repay the loan are influenced by the timing of cash availability for business activities. Risk reduction drives the decision to request a *larger microloan funding goal* and a *longer microloan repayment duration*. The *longer microloan repayment duration* makes more capital available to the borrower now by deferring payment to some future date and generates a smaller debt-service burden than would a shorter repayment duration. The lower debt burden is created by a less immediate need for cash and thus carries a lower risk of a borrower failing to make microloan payments on time, or defaulting, resulting in overall lower risk for the business. Similarly, deferring payment reduces risk because it provides time. In summary, women are more likely to request a longer microloan repayment duration to reduce the need for cash, increase their stock of time, and thus reduce the risk of possible negative outcomes.

Analogous to the mechanism that drives longer repayment durations, the decision about the *larger microloan funding goal* is also influenced by decisions about risk. Holding other factors equal, the greater

⁴ Sometimes portrayed as “the confidence gap” in mainstream media (see, for instance, <https://www.theatlantic.com/magazine/archive/2014/05/the-confidence-gap/359815/> and <https://www.forbes.com/sites/jackzenger/2018/04/08/the-confidence-gap-in-men-and-women-why-it-matters-and-how-to-overcome-it/?sh=60baabc3bfa1>).

⁵ Camerer and Lovallo (1999) make clear that women, in general, are less likely to be overconfident than are men.

available financial slack offered by large microloans can act as a cushion against unforeseen consequences, thus reducing risk. Financial slack can be especially beneficial to reduce risk in contexts of heightened environmental uncertainty (Latham & Braun, 2008), which is characteristic of a context in which someone pursues an entrepreneurial career. In their study of entrepreneurial finance and risk, Chen et al. (2010, p. 4348) use empirical evidence and micro-theory to argue that debt provides significant diversification benefits, such that “more risk-averse entrepreneurs choose higher leverage.” This is because debt helps to reduce the entrepreneur’s exposure to idiosyncratic business risk and personal equity exposure by enabling risk sharing with the debt holder. Other studies (Herranz et al., 2015, p. 25) have replicated these results, finding that “more risk-averse entrepreneurs run smaller, more highly-leveraged firms and default less, because running a smaller firm with higher debt reduces personal funds at risk in the firm.” Lastly, smaller loans may be indicative of entrepreneurs who overestimate their capacity to accomplish business tasks on time and on budget (i.e., an overconfidence bias).

While women may often seek larger loans, it is essential to differentiate between the loans women-owned businesses actively seek and the loans they ultimately receive (Muravyev et al., 2009). Gender congruity theory, which underscores the alignment between gender roles and societal expectations, suggests that women might often be allocated smaller loans than their male counterparts (Brush et al., 2008; Eagly & Karau, 2002). Furthermore, women entrepreneurs frequently gravitate towards less capital-intensive sectors, which inherently require smaller loans (Robb & Coleman, 2010; Verheul & Thurik, 2001; Watson & Robinson, 2003). Such choices can be seen as a manifestation of gendered risk-aversion patterns. However, when all other factors are held constant, it is plausible to argue that women-owned businesses, in their pursuit to mitigate risks, would opt for larger microloans, as argued above. This perspective aligns with Robb and Coleman (2010), who highlighted that women entrepreneurs often adopt different financial strategies, influenced by their risk perceptions and the nature of their businesses. Thus, we hypothesize that women-owned businesses request a longer microloan repayment duration and a larger microloan goal than men-owned businesses. This discussion leads to our second set of hypotheses:

Hypothesis (H2a). *The requested microloan repayment duration is longer for women-owned businesses than it is for men-owned businesses.*

Hypothesis (H2b). *The requested microloan funding goal is larger for women-owned businesses than it is for men-owned businesses.*

3.3. Microlending structure and ‘time to reach a microloan funding goal’: A lender-driven explanation

So far, the gender role congruity theory has enabled us to posit a relationship between gender and ‘time to reach a microloan funding goal’ based on lender gender stereotypes, while the literature on gender risk

preferences has helped us posit the relationship between gender and microlending strategy (i.e., the borrower's microloan funding goal and repayment duration). Since microlending strategies also constitute important considerations for lenders, independent of the borrower's gender, we return to the lender-driven explanation and apply risk preference arguments to establish why and how borrowers' microlending strategies impact the willingness of lenders to issue microloans, and thus the time that borrowers face to reach their funding goals.

Holding all else equal, microlenders, most of whom are sensitive to risk (Allison et al., 2015), generally prefer smaller loans because smaller loans have an effect on a lender's loan portfolio diversification, which has been shown to have positive effects on realized risk (Rossi et al., 2009). Although microloan investors aim to create a positive social impact and are therefore willing to lend to the poor (i.e., those with little, or no, collateral) research shows that they are still sensitive to the risks of lending to this disadvantaged group (Allison et al., 2015; Anglin et al., 2020). Additionally, a shorter repayment time makes issued capital available to lenders sooner, which increases the real-option value of capital (Lambrecht, 2017). That is, lenders prefer a shorter repayment period because it allows them more opportunities to respond to new lending opportunities. Thus, lenders, independent of the borrower's gender, prefer a near-future time resolution of risk and, as such, prefer loans that are smaller and have shorter repayment periods.

Given that microlenders prefer smaller microloans and shorter repayment durations, it naturally follows that as the requested repayment time or size of the microloan increases, so too should the time faced by borrowers to reach their microloan funding goal. In other words, we identify microloan repayment duration and funding goal decisions as additional potential reasons for why the timespan to reach a microloan funding goal is longer for women-owned businesses relative to their male counterparts. Hence, lender preferences regarding microlending structure decisions are also expected to explain the differing timing outcomes for businesses owned by either gender. This leads us to our last set of hypotheses:

Hypothesis (H3a). *The longer microloan repayment duration that women-owned businesses request partially mediates the longer timespan they face in reaching their microloan funding goals compared to that of their male counterparts.*

Hypothesis (H3b). *The larger microloan funding goals that women-owned businesses request partially mediates the longer timespan they face in reaching their microloan funding goals compared to that of their male counterparts.*

4. DATA AND METHODOLOGY

The rise of crowdfunding, in general, and crowdlending, specifically, provides opportunities to observe sources of gender difference more closely. First, because crowdfunding data is stored online indefinitely after the failed or successful completion of a campaign, it does not suffer from left-truncation to the same extent that traditional funding data sources do, which over-select on more durable businesses (Yang & Aldrich, 2012)—nearly all failed and successful businesses can be observed in crowdfunding data. Should

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gender differences exist in business resource mobilization, which they almost certainly do (Grossman et al., 2012; Yang & del Carmen Triana, 2019), left truncation would lead to biased samples and mistakenly estimated results—these samples are likely to overrepresent male-owned business and thus obfuscate underlying gender-relevant mechanisms. Crowdfunding resolves this selection bias.

Second, crowdfunding strategies are adopted by business owners well in advance of a campaign launch and crowdfunding data is publicly available in a standardized format before funding decisions are made by investors. This removes some of the simultaneity concerns present in traditional data sources. For instance, should lenders signal a preference for male characteristics during a funding pitch, female borrowers are likely to adopt such characteristics in future pitches to improve their chances of funding, resulting in endogeneity concerns (Balachandra et al., 2019), once again obfuscating the relationship between gender and outcome. Simultaneity is resolved on crowdfunding platforms, where campaign strategies are prepared before they are made public on the platforms.

Third, crowdfunding is one of the only large-scale sources of reliable data on capital resource mobilization in developing countries and about marginalized, low-income entrepreneurs. The over- or under-sampling of ethnic and social groups in management research is skewing our understanding of decision-making in business (Terjesen et al., 2016). According to Henrich et al. (2010), the problem is so great that 96% of all subjects in social science and psychology come from western countries (68% from the U.S.). The western bias has even developed its own acronym, ‘weird’ (western, educated, industrialized, rich, and democratic). Kiva samples disproportionality developing world recipients. For these reasons, crowdfunding generally, and Kiva specifically, present an opportunity to study organizations supporting marginalized entrepreneurs that would not have been otherwise possible.

We acquired data from the crowdlending platform Kiva (<http://build.kiva.org/>), a U.S.-based non-profit that enables both individuals and small businesses to apply for microloans. As noted earlier, individuals can apply for personal loans (e.g., cars, tuition, mortgage/rent) and business loans. Once the microloan is approved and underwritten, the loan appears on the Kiva website where lenders (e.g., members of the public, organizations, businesses) can commit US\$25 or more until the borrower’s microloan goal is reached. The microloan is either transferred to the borrower through an online platform or administered by a partnering organization that operates in the borrower’s local community. As of fall 2020, over 3.7 million borrowers from 77 countries borrowed a total of \$US1.51 billion in microloans. Although Kiva’s borrowers do not provide collateral to guarantee the microloan’s repayment, the default rate is less than 4% (Kiva, 2020).

Kiva’s database comprises 1,419,607 personal and business microloans awarded from its inception in 2005 to 2018. For our research purpose, we focus on business microloans awarded from 2013 to 2018;

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although Kiva began operating in 2005, it introduced ‘tags’ to identify women-owned businesses in 2013. Our sample contains 294,071 business microloans of which 24.5% are for women-owned businesses. The top five countries in the sample are the Philippines (21.6% of the sample), Kenya (15.0%), El Salvador (6.4%), Pakistan (6.3%) and Cambodia (5.0%). Most borrowers work in the agricultural sector (72.8% of the sample). In fact, borrowers were most likely to request loans to support their farming (29.7 % of the sample) and other agricultural (9.5%) activities or purchase livestock, such as pigs (11.4%), poultry (4.6%) or other livestock (5.3%).

Dependent variable. The dependent variable is *time to funding*, which is the number of days that a crowdlending campaign takes to reach its funding goal (target amount) (as used in e.g., Allison et al., 2015; Moss et al., 2018). For our Kiva sample, the average time to reach a microloan funding goal is 14.66 days, with a minimum timespan of two minutes (0.0014 days) and a maximum of 82.26 days. We log-transform the dependent variable to adjust for skewness.

Independent variable. The independent variable is binary to capture whether the microloan-seeking business is women-owned (1) or men-owned (0). We use the ‘tag’ provided by Kiva to identify business ownership.

Mediating variables. The first mediating variable is the borrower’s requested *repayment duration* in number of months. The second mediating variable is the borrower’s *requested microloan funding amount* (goal) in U.S. dollars. Our sample’s average repayment duration is 14.02 months, and the average microloan funding goal is US\$779.81. We log-transform both mediating variables to adjust for skewness.

Control variables. Although the Internet reduces many geographic distance frictions, local and distant funders exhibit differences in funding behavior, which appears to be the result of offline social relationships (Agrawal et al., 2015). Hence, business owners’ propensity to seek funding on a crowdlending platform are likely influenced by their country’s norms and rules of law such as norms of community identity (Elam & Terjesen, 2010), regulatory efficiency (Brieger et al., 2021; Darnihamedani & Terjesen, 2022), and local regulation of crowdfunding markets (Vismara, 2016). We therefore control for *country-level effects* using a categorical variable that identifies each of the 75 countries represented in our sample. Since the nature of the business is likely to influence the characteristics of the microloan, we include another categorical variable for *business sector* (i.e., agriculture, wholesale, manufacturing, services, and transportation). Kiva has also been growing in popularity among both lenders and borrowers, which has encouraged us to consider the *year of a crowdlending campaign posting* on kiva.com to control for temporal effects that could influence the funding request and repayment period. Moreover, Kiva allows for three *repayment schedules*—monthly, at a maturity date, or at irregular intervals—which we control for with a categorical variable, given that the repayment schedule is likely to influence how fast a microloan reaches

its funding goal. The last control variable is the *local partnering organization's risk rating* (if any). Numerous crowdfunded microloans are administered by these organizations and their risk ratings are likely to influence how fast a microloan applicant reaches its funding goal. This risk rating ranges from a half star to five stars and captures the default risk of the partnering organization (an inverted scale with high values indicating low default risk).

5. RESULTS

5.1. Main analysis

Table 1 presents descriptive statistics and pairwise correlations for the continuous variables. All correlations in Table 1 are significant at $p < 0.05$, which is expected since our sample size is relatively large. Time to funding has largest positive correlations with microloan goal, repayment duration, and women-owned business, the three variables we are focusing on in this article. We also note that being a women-owned business is positively associated with repayment duration and microloan goal. Table 2 offers the results of regression models to test the hypotheses. We establish that our models do not suffer from multicollinearity issues by assessing the GVIFs (Fox & Monette, 1992). Model 1 in Table 2 includes only the control variables, while Models 2–5 represent the four-step mediation analysis we use and describe next.

We used a four-step mediation analysis (Baron & Kenny, 1986) to test the hypotheses, with all models using bootstrapping to produce the regression output. We used R software to conduct the analysis. First, we established the direct effect between the independent variable (women-owned business) and the dependent variable (time to funding), confirming a statistically significant relationship between these two variables. Second, we tested whether the independent variable predicted the two mediators (requested microloan repayment duration and requested funding goal). Third, we analyzed whether the mediators had a statistically significant effect on the dependent variable, when both mediators and the independent variable were included in the regression model. Fourth, we assessed whether the effect of the independent variable decreased when the two mediators were included in the empirical model. We then used the Sobel test to verify whether the requested microloan repayment duration and funding goal mediated the effect of the independent variable (business owner gender) on the dependent variable (time to funding) (MacKinnon et al., 1995). We later conducted a series of robustness checks that confirmed the results of our main analysis.

----- INSERT TABLES 1 AND 2 HERE -----

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H1 posits that women-owned businesses will take more time to reach their microloan funding goals than men-owned businesses due to a lender-driven explanation discussed in Section 3.1. The effect of the independent variable is statistically significant in Model 2 where the two mediators are excluded ($\beta = 0.358$, $p < 0.001$) and in Model 5 where the two mediators are included ($\beta = 0.242$, $p < 0.001$). In other words, when we account for the borrower-driven explanation in the analysis, the effect of the independent variable (business owner gender) remains statistically significant, thus confirming the existence of a lender-driven explanation as postulated in H1.

H2a and H2b introduce a borrower-driven explanation described in Section 3.2, by positing that the requested microloan repayment duration and funding goal should be longer and larger, respectively, for women-owned businesses relative to men-owned businesses. Model 3 shows that women request longer repayment durations ($\beta = 0.089$, $p < 0.001$) and Model 4 shows that women request larger funding goals ($\beta = 0.169$, $p < 0.001$) for their crowdlending campaigns, thus supporting H2a and H2b.

H3a and H3b posit that the requested microloan repayment duration and the requested microloan funding goal should both partially mediate the longer time needed to fund women-owned businesses relative to men-owned businesses. Model 5 shows that the requested microloan repayment duration has a significant positive effect on ‘time to funding’ ($\beta = 0.541$, $p < 0.001$) as does the requested microloan funding goal ($\beta = 0.409$, $p < 0.001$). In addition, the effect of the independent variable (women-owned business) is reduced from 0.358 in Model 2 to 0.242 in Model 5; the Sobel tests show statistically significant results ($z = 25.06$, $p < 0.001$ for repayment duration and $z = 26.02$, $p < 0.001$ for the funding goal). In other words, our findings support H3a—the partial mediation of the requested microloan repayment duration—and H3b—the partial mediation of the requested microloan funding goal—on the longer time taken to fund women-owned businesses relative to men-owned businesses.

5.2. Robustness checks

For the first robustness check, we rerun the last step of the four steps in the mediation analysis separately for each mediator. Specifically, instead of including both mediating variables in the full model (as in Table 2’s Model 5), we run two models with each mediator added separately. Table 3 shows that the results are consistent (in terms of sign, magnitude, and significance) with those reported in Table 2. In each model reported in Table 3, the mediator has a significant positive effect on ‘time to funding’ ($\beta = 0.667$, $p < 0.001$ for the requested microloan repayment duration; $\beta = 0.445$, $p < 0.001$ for the requested microloan funding goal). Furthermore, in both models, the effect of the independent variable (women-owned business) is reduced from 0.358 to 0.299 for the requested microloan repayment duration and from 0.358 to 0.283 for the requested microloan funding goal. Therefore, this robustness test also provides support for H3a and H3b.

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As a second robustness check, we use path analysis modeling (Rosseel, 2012). Unlike the two mediation analyses discussed above, path analysis allows for testing dependencies among the variables (in Figure 1) by simultaneously estimating all equations (or paths) in a mediation model. We initially regress the dependent variable—time to funding—on the control variables to remove the variance they explain, and then we use the residuals from this regression as the dependent variable. The results in Table 4 are again consistent with those reported in Table 2. Specifically, the coefficient for each path in Figure 1 is statistically significant. In addition, the indirect effects of both mediating variables—the requested microloan repayment duration and the requested microloan funding goal—are also statistically significant. Therefore, this second robustness test also provides support for our hypotheses.

----- INSERT TABLES 3, 4 and 5 HERE -----

As a third robustness check, we conducted robust mediation analysis using ‘robmed’ package in R (Alfons et al., 2022). This package allows for conducting a mediation analysis using robust bootstrap methodology, even when the data fails to satisfy classic regression analysis assumptions (i.e., the data contain outliers or distributions of certain variables are not normally distributed). Like the first robustness check, we conducted the analysis for each mediator separately. This approach reveals average indirect, direct, and total effects in the mediation analysis as well as the proportion of the effect mediated. We report these effects in Table 5 based on 1,000 bootstrap iterations. The results reveal that this robustness check provides further support for our hypotheses.

6. DISCUSSION

6.1. General discussion

The literature on gender differences in resource mobilization has largely focused on differences in *how much money* women-owned businesses raise relative to their male counterparts. This article explores another outcome on which men and women face differences—*time* to reach a funding goal. The topic of time is central to risk preferences research, yet we understand little about how much importance entrepreneurs place on time and how they trade it against other resources, such as money. We investigated the topic of time preferences in the relatively new context of a crowdlending platform supporting marginalized entrepreneurs. Although time plays an important role in business performance and survival (e.g., time management strategies are crucial to new product development processes, internationalization, and innovation strategies), the very crucial factor of time is likely to continue to be overlooked if scholars do not recognize this unseen dimension. With this research, we take a step in this direction by examining a

specific time-related outcome—time to reach a microloan funding goal—and the strategies that influence this outcome.

Our findings, when juxtaposed against Welter et al.'s (2019) call for a richer contextual understanding, serve as a testament to the intricate fabric of entrepreneurship woven with threads of gender, risk perception, and societal structures. Microlending, as a context, presents a rich tapestry of socio-economic interactions that both empower and challenge women entrepreneurs. Recognizing these dynamics allows for a more holistic grasp of the underlying mechanisms, advancing both gender role congruity theory and the risk preference perspective by grounding them in the lived realities of entrepreneurs within microlending ecosystems.

6.2. Theoretical contributions

In examining business resource mobilization, we ought to consider differences in outcomes other than the capacity to raise money. The exploration of other outcomes can deepen our understanding of performance differences in general, thus contributing to the literature on resource mobilization by providing a more comprehensive picture of differences in strategic decision-making and in access to resources. Our research also demonstrates that men and women make different trade-offs when it comes to resource mobilization. Women request larger microloan amounts and longer timespans to repay these microloans, which result in the opportunity cost of waiting longer to reach their funding goals. These results highlight that the differences underlying women- and men-owned businesses are more nuanced and complex than gender bias.

In light of the findings from our research, it is imperative to delve deeper into the nuances of gender role congruity theory and risk preference perspective, particularly in the realm of microlending. Drawing insights from Welter et al. (2019), which underscores the importance of contextualization in entrepreneurship research, our study situates itself in the intricate interplay of gender and microlending practices. The observed disparities in microloan funding timelines and the evident borrower-driven explanations underscore that women entrepreneurs, within the specific context of microlending platforms, face unique challenges and operationalize distinct strategies. These are not merely reflections of inherent gender biases but are deeply embedded in socio-cultural and economic contexts that shape entrepreneurial behavior and risk perceptions. While gender role congruity theory suggests that societal perceptions of gender roles might contribute to these observed differences, the risk preference perspective is nuanced by the evident strategic choices made by women entrepreneurs in microlending contexts. The larger requested loan amounts and longer repayment durations, for instance, might stem from a combination of societal expectations and self-imposed strategies rooted in perceived risks and benefits.

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The decoupling of business loans from all microloans allows us to add to the crowdlending literature, particularly to research exploring gender differences in resource mobilization for commercial rather than personal purposes. While most microloan borrowers are women, women-owned businesses constitute only about one quarter of all business borrowers on Kiva. Not accounting for differences in personal and business loans presents challenges in understanding differences between women- and men-owned businesses in resource mobilization on crowdlending platforms. While researchers are rightfully arguing for care in generalizing across platforms (Dushnitsky & Fitza, 2018), we extend this argument to generalizing within platforms. Even a single platform like Kiva draws on a very broad group of borrowers and lenders. To develop a deeper understanding of transactions on these platforms, scholars must be careful not to generalize across an entire crowdfunding type or even to a single crowdfunding platform.

We also add to the gender in entrepreneurship literature by exploring an increasingly important form of finance for women in developing countries, *crowdlending*. Our findings suggest that female business owners structure early-stage debt differently than male business owners do. Men-owned businesses may have advantages in industries that reward first movers because men-owned businesses are funded earlier, while women-owned businesses may experience advantages in industries that require larger initial capital endowments as women request larger loans. Furthermore, the time-based differences we explore could, when extended to other stages of the funding process, such as the time to post a project on Kiva, lead to more substantial differences between men and women on industry entry.

To develop a theory about the microlending performance of women-owned businesses, we integrated gender role congruity theory and risk preference research. This integration enabled us to develop theory about why female business owners adopt certain debt-structure strategies on the microlending platform Kiva. It should be noted that we do not take a stance about the relationship between either risk-seeking or risk-averse strategies and business performance, nor do we suggest or promote the view that business is a gendered subject that rewards masculine traits (e.g., risk seeking) and that, as such, women should be more like men to succeed in business. We do not make these claims for two important reasons. First, the evidence about risk seeking and aversion as rewarded or penalized in business is mixed (Zhao et al., 2010), with most convincing evidence suggesting that some “medium” level of risk-taking is linked to entrepreneurial survival (Caliendo et al., 2010). In fact, because of their limited resources, nascent entrepreneurs tend to minimize, manage, and reduce risk (Caliendo et al., 2009). Thus, one cannot claim that risk-seeking or -aversion is superior. Second, even if one could make such a claim, one cannot claim that such findings extend to the context of crowdfunding in general, and crowdlending in particular. Emerging evidence suggests that crowdfunding is broadly different in significant ways from traditional sources of finance (Calic & Mosakowski, 2016; Schwiendbacher, 2018).

6.3. Practical implications

Developing a research agenda that addresses performance differences in the context of microlending, especially disparities in funding around gender, carries important implications for the alleviation of poverty. Reducing poverty will depend, in large part, on the freedom to establish organizations that help disadvantaged populations gain access to financial resources, thus enabling these populations to capture value from their own hard work (Yunus, 2003). The lack of financial institutions serving the poor makes microlending platforms like Kiva an important tool for this freedom and thus for poverty reduction (Cruz Rambaud et al., 2022). Moreover, the role of women in poverty reduction is not just a question of human or civil rights. Female and male business owners are equally recognized as crucial to the alleviation of their community's poverty and national social development (Gafni, Hudon, et al., 2021; Shah & Saurabh, 2015). Therefore, understanding gender differences in business performance is a way to reduce global poverty and suffering.

Providing low-income entrepreneurs with a means to acquire small loans without collateral is meant to give marginalized entrepreneurs more agency in their economic welfare by spurring business ownership. Yet, in some places, such as Sri Lanka, microloans have burdened the poor by saddling them with huge amounts of debt (The Economist, 2019). Reports such as these present reasons to caution against the generalizability of our findings. Future research is needed on “offline” microfinance, particularly in decision-making about loan size and repayment duration. Should our findings that women request larger microloans extend beyond crowdlending to the microlending industry more generally, such decisions by women could, paradoxically, prove detrimental to their capacity to repay the loans, particularly in contexts in which microlenders exercise predatory lending practices and borrowers do not pay careful attention to (or know nothing about) interest rates, which can be as high as 220%. Moreover, women can be especially susceptible to the negative consequences of predatory practices where microfinance companies create brutal situations in which loan officers extort women for sexual favors (Hemmathagama, 2018).

This study offers significant insights for the management of MicroFinance Institutions (MFIs) that structure microloans for populations in developing countries. One key observation is that women typically experience longer wait times to finance their businesses compared to men. This disparity can influence how MFIs counsel both female and male business owners. For example, by providing more accurate funding timelines, MFIs can assist business owners in better managing their limited resources. Additionally, the discovery that loan structures can extend the time to secure funding on microlending platforms is valuable information for all businesses seeking financing through MFIs. Furthermore, our research underscores gender-based differences in risk preferences related to borrowing. Recognizing these

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differences can enable MFIs to identify businesses that might be either overly cautious or excessively risk-seeking, and understand how such tendencies might influence their funding objectives.

The findings of this study carry significant political implications, especially in the realm of gender equity, economic policy, and the promotion of entrepreneurship in developing nations. The observed gender disparities in microloan funding timelines are not merely indicative of systemic biases but also highlight the distinct strategies and preferences of female entrepreneurs. Politically, these findings challenge the traditional narrative that views male entrepreneurial strategies as the normative benchmark. Governments and international bodies can harness these insights to craft policies that recognize and value the unique approaches of female entrepreneurs. Instead of trying to mold women-owned businesses to fit into a male-centric framework, policies should be designed to support and amplify the distinct strategies employed by women. This can involve creating more flexible lending criteria, offering tailored financial literacy programs, or even establishing funding pools specifically designed for businesses that adopt longer-term, potentially less risky strategies.

Moreover, the practical implications of this study extend to the field of capacity building and training for potential borrowers. The observed disparities in microloan applications and funding timelines suggest a potential gap in financial literacy and awareness. Training programs can be initiated, focusing on improving financial knowledge, strengthening negotiation skills, and fostering a deeper understanding of loan terms and implications (Servon & Doshna, 2000). Such initiatives not only prepare borrowers to make more informed decisions but can also empower them to effectively communicate their business needs and growth strategies to microlenders. Furthermore, there is an evident need for transparency from MFIs. By ensuring borrowers understand the loan terms and implications, and by shedding light on the funding timeline, microlenders can mitigate potential misunderstandings and build trust with their clientele (Armendáriz & Morduch, 2010).

Considering the potential risks associated with predatory lending, especially for women borrowers, the findings emphasize the importance of strengthening competition among MFIs. More options for borrowers can ensure that MFIs adhere to fair lending practices and maintain transparency in their operations in a way that gives borrowers more choices. This can be achieved through open markets, establishing a clear regulatory framework specific to microlending, and developing a robust complaint redressal mechanism (Lapie & Mersland, 2011). Additionally, partnerships can be fostered between NGOs, local governments, and MFIs to conduct community outreach programs, educating potential borrowers about their rights and the available avenues for seeking redress in case of grievances. Such proactive measures not only safeguard the interests of borrowers but also enhance the reputation and credibility of MFIs operating in these regions (D'Espallier et al., 2013).

6.4. Limitations and future work

One of the limitations of the current research is that we focus on women- or men-owned business and that we observe those businesses at only one point in time. However, extant research suggest that diverse teams outperform homogenous teams (Adams & Ferreira, 2009; Conyon & He, 2017; Conyon & Mallin, 1997), particularly on dimensions of creativity and innovation (A. Wu et al., 2022). Whether similar results would apply to the context of crowdlending on Kiva, much of which occurs in developing countries and male dominant societies, remains unclear. In some contexts, gender diverse teams possibly benefit from differences in risk preferences, while in others one preference dominates another in business decisions. Relatedly, Srikanth et al. (2016) suggest that “diversity in groups has different short-term and long-term effects” that can only be captured over time. As such, future research can more accurately capture the effects of gender diverse teams by observing team processes and outcomes over time, rather than at a single point in time.

Crowdfunding in general, and crowdlending in particular, represent important contexts in which to explore and better understand evolving gender differences in resource mobilization (Cruz Rambaud et al., 2022). As detailed in Section 2, recent research suggests that women may be particularly successful in the crowdfunding context (Greenberg & Mollick, 2017; Johnson et al., 2018). Nevertheless, crowdfunding appears to maintain some differences in outcomes between women and men. Parhankangas et al. (2019) find that pitching a business like a man (i.e., exhibiting less feminine-stereotyped behaviors) boosts the crowdfunding success of female-run businesses. An interesting question for future research is whether traditional forms of funding have adopted or are influenced by gender norms (and stereotypes) of crowdfunding platforms. Have investors’ and lenders’ willingness to fund women-owned businesses changed after crowdfunding success for women-led businesses? While evidence suggests that crowdfunding is reducing differences in access to finance for women, questions remain about which differences persist and why they do.

Researchers investigating gender bias in crowdfunding contexts must also be specific about the type of crowdfunding they investigate (Calic, 2018). While early evidence suggests that gender-based bias has been eliminated on reward-based crowdfunding platforms (Greenberg & Mollick, 2017; Johnson et al., 2018), that is not the case for equity-based crowdfunding platforms (Geiger & Oranburg, 2018; Hervé et al., 2019; Mohammadi & Shafi, 2018; Vismara et al., 2017). Just as important as inter-platform differences are intra-platform differences in funding. Crowdlending platforms issue personal and business microloans (we recall that while women constitute 83% of all Kiva borrowers, women-owned businesses make up only 24% of business borrowers). Furthermore, any differences that we observe on platforms supporting marginalized entrepreneurs such as Kiva may not extend to the broader microloan industry.

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While we include industry (i.e., sector) controls in our analysis, exploration of the gender-based choice differences by industry and how this impacts time to funding warrants further exploration. Orser, Riding & Manley (2006) find that size and sector are not independent of the gender of ownership. Women are more likely to concentrate in the wholesale, retail, and services sectors. (The authors suggest that women owners are found in sectors that are of less value to venture capital organizations, suggesting this as one reason why women-owned businesses mobilize fewer financial resources.) Once the authors controlled for size and sector of the business, they found that women owners were no less likely to see debt, lease, or supplier financing. It remains an open question how industry-based choices affect lender decisions around time. This is particularly important because the value of time differs among industries. For instance, our sector controls had a statistically meaningful impact on time to funding.

Crowdfunding presents an interesting context for understanding the role of risk in gender differences. Specifically, the perspective of risk and how individuals manage it plays an important role in lending- and debt-based environments such as Kiva. How business owners manage and experience risk in this context is an important question for future study. Diary studies and experience sampling research could be useful in exploring the experience during the funding and repayment stages when business owners engage in debt-based resource mobilization strategies. These methods can be particularly useful for unpacking the risk management experience over time. Another underexplored but important area is the long-term, post-crowdfunding outcomes of these decisions for both the businesses and the wider community. Finally, more complex statistical models could be leveraged, such as moderated-mediation models, to explore whether factors such as repayment strategy can play a moderating role on the extent to which repayment duration and microloan goal mediate the relationship between the nature of a business (i.e., owned by a woman) and the time it takes to reach that goal.

7. CONCLUSION

In this article we focus on examining the effect of gender on the time to reach a microloan funding goal. Using data from the largest crowdfunding website supporting marginalized entrepreneurs, kiva.org, we find strong evidence that women-owned businesses face a longer time to reach their microloan funding goals than do men-owned businesses. This effect is partially explained by the fact that female business owners tend to request larger amounts to borrow and longer repayment periods relative to male business owners, which highlights that decision made by women influence the ‘time to funding’, an important outcome. One possible explanation is that women’s risk preferences predispose female business owners to make strategic decisions that influence the time needed to achieve their funding goals. Seen through the lens of risk preferences, larger microloan funding goals and longer microloan repayment durations benefit them because these loan amounts (generally higher than those of their male counterparts) provide more padding

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against uncertainty. We hope that our work encourages other scholars to explore how and why gender differences might impact microlending, one important solution to global poverty alleviation.

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On why women-owned businesses take more time to secure microloans

TABLE 1 Descriptive statistics and pairwise correlations

Variable	Mean	SD	Min	Max	1	2	3	4	5
1. Time to funding	14.66	12.05	0.00	82.26					
2. Women-owned business	0.24	0.43	0.00	1.00	0.14				
3. Repayment duration	14.02	7.53	2.00	146.00	0.26	0.05			
4. Microloan goal	779.81	963.78	25.00	100000.00	0.31	0.05	0.23		
5. Year	2015.27	1.38	2013	2018	0.09	0.27	-0.02	-0.10	
6. Risk rating	3.26	0.87	0.50	4.50	0.01	0.07	0.03	0.02	0.005

All correlations are significant at $p < 0.05$ (expected since our sample size is relatively large).

TABLE 2 Regression analysis

	Dependent variable				
	Model 1 Time to funding [†]	Model 2 Time to funding [†]	Model 3 Repayment duration [†]	Model 4 Microloan goal [†]	Model 5 Time to funding [†]
<i>Control variables</i>					
Year	0.084***	0.055***	-0.009***	-0.036***	0.074***
Country	Included	Included	Included	Included	Included
Sector: Manufacturing	-0.430***	-0.389***	-0.021***	0.178***	-0.448***
Sector: Services	-0.025***	-0.068***	-0.044***	0.035***	-0.058***
Sector: Transportation	0.215***	0.265***	-0.011***	0.080***	0.239***
Sector: Wholesale	0.054	0.045	-0.035***	0.324***	-0.075*
Risk rating	0.051***	0.03	0.036***	0.052***	-0.010***
Repayment: Irregular	-0.273***	-0.313***	-0.030***	-0.241***	-0.199***
Repayment: Monthly	-0.107***	-0.150***	0.120***	-0.260***	-0.109***
<i>Independent variable</i>					
Woman-owned business		0.358***	0.089***	0.169***	0.242***
<i>Mediators</i>					
Repayment duration [†]					0.541***
Microloan goal [†]					0.409***
R ²	0.131***	0.148***	0.530***	0.475***	0.231***
F value	539	613	3996	3208	1037

Note: $n = 294,071$; regression coefficients are bootstrapped; [†]variables are log-transformed; *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

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TABLE 3 Mediation analysis results with each mediator added separately

	Dependent variable Time to funding†	
<i>Control variables</i>		
Year	0.060***	0.071***
Country	Included	Included
Sector: Manufacturing	-0.375***	-0.468***
Sector: Services	-0.039***	-0.085***
Sector: Transportation	0.274***	0.230***
Sector: Wholesale	0.071*	-0.101**
Risk rating	0.006	0.007*
Repayment: Irregular	-0.293***	-0.206***
Repayment: Monthly	-0.229***	-0.034***
<i>Independent variable</i>		
Women-owned business	0.299***	0.283***
<i>Mediators</i>		
Repayment duration†	0.667***	
Microloan goal†		0.445***

†Variables are log-transformed. ***p < 0.001, **p < 0.01, *p < 0.05.

TABLE 4 Results for the path analysis

Path	Coefficient
Women-owned business → Time to funding†	0.27***
Women-owned business → Repayment duration†	0.05***
Women-owned business → Microloan goal†	0.09***
Repayment duration† → Time to funding†	0.23***
Microloan goal† → Time to funding†	0.21***
<i>Mediating effect</i>	
Repayment duration	0.01***
Microloan goal	0.02***

†Variables are log-transformed; ***p < 0.001.

TABLE 5 Results for the robust mediation analysis

Effect	Repayment Duration	Microloan Goal
Average Indirect Effect	0.05***	0.07***
Average Direct Effect	0.24***	0.24***
Total Effect	0.29***	0.31***
Proportion Mediated	0.17***	0.22***

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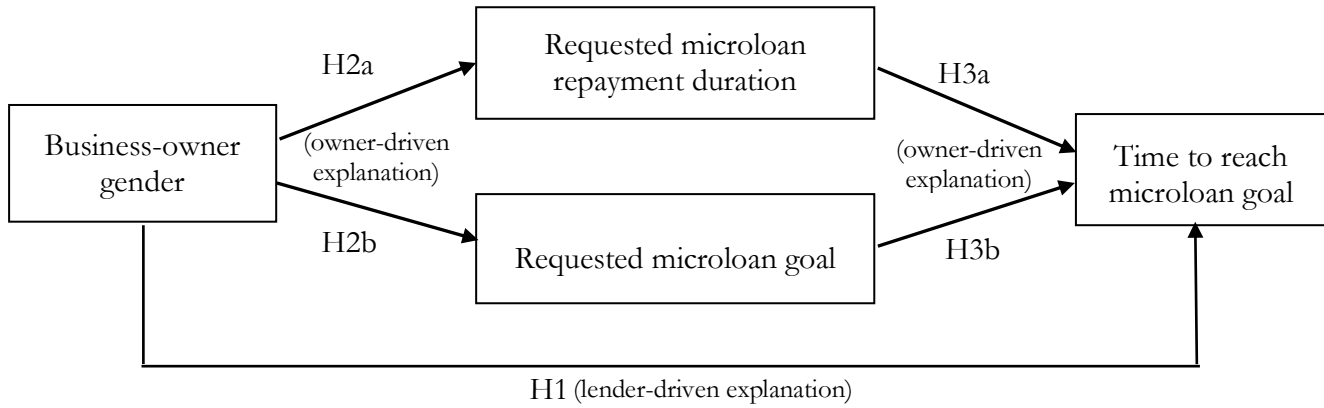


FIGURE 1 Hypotheses



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