Gendered Access to Finance: The Roles of Team Formation, Idea Quality, and Implementation Constraints in Business Evaluations

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Abstract

We analyze gender bias in entrepreneurship finance. Access to finance is crucial for entrepreneurial success, yet women are particularly constrained. We structurally unpack whether loan officers evaluate business ideas and implementation constraints differently for male and female entrepreneurs, for both individual entrepreneurs and for entrepreneurial teams. In a lab-in-the-field experiment with Ugandan loan officers, we document gender bias against individual female entrepreneurs, but no bias for entrepreneurial teams. The bias is not driven by animus but by differential beliefs about women's implementation constraints in running a business. Policies aimed at team formation and alleviating family-related constraints may help to promote equal access to finance, ultimately stimulating growth.

Keywords: Gender Bias, Access to Finance, Entrepreneurship Finance, Business Evaluations, Teams, Lab-in-the-field Experiment

JEL Codes: C90, D91, G21, J16, L25, L26, 016

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1 Introduction

Access to finance plays a crucial role in unleashing the potential of entrepreneurial ideas and transforming start-ups into successful businesses. While many firms face financing constraints (Banerjee & Duflo, 2014; Carpenter & Petersen, 2002), these constraints are more pronounced for female entrepreneurs: Women are less likely to have the necessary financing to start a business (OECD, 2017), they face greater challenges in attracting external equity (Ewens & Townsend, 2020; Guzman & Kacperczyk, 2019; Hebert, 2023), and their constraints to debt finance are more pronounced. Female entrepreneurs tend to secure smaller loan amounts (Agier & Szafarz, 2013; Bartos et al., 2023; Bellucci, Borisov, & Zazzaro, 2010; Demirguc-Kunt et al., 2018), pay higher interest rates (Asiedu, Freeman, & Nti-Addae, 2012), are more likely to be denied a loan (Morazzoni & Sy, 2022), and are often required to provide more loan guarantees (Brock & De Haas, 2023). Designing targeted policies to close the gender gap requires an understanding of whether the gap is driven by demand or supply factors, and identification of potential biases and their underlying mechanisms.

In this study, we focus on gender bias and its underlying mechanisms on the supply side of access to finance. Specifically, we analyze whether loan officers' assessment of the performance of a start-up is influenced by the gender of its entrepreneurs and its team size. Using a lab-in-the-field experiment in Uganda, 451 loan officers of a large bank for entrepreneurship finance evaluate real-life business pitch decks, a short presentation of a business idea, in which the gender and the team composition have been randomly manipulated by us. Our design enables us to disentangle underlying mechanisms behind a potential gender bias in the evaluations of loan officers, by distinguishing gender differences in the evaluation of the business idea itself from those of the implementation challenges and capabilities of the entrepreneur. A supplementary survey on entrepreneurial success with 179 loan officers of another large bank for entrepreneurship finance helps us to differentiate implementation challenges from entrepreneurs' capabilities.

Our setting is ideal to answer this question. First, we study debt financing, the predominant source of access to finance for start-ups in low-income countries where venture capital is scarce (AVCA, 2022; Jaoui, Amoussou, & Kemeze, 2022).[1] Second, loan officers are a relevant sample because they are the first point of contact with the bank. Their role is to assess applicant creditworthiness based on (often incomplete) information about the business and the entrepreneur's characteristics, and in the absence of a credit registry. However, predicting entrepreneurial success

[1] In 2022, the value of venture capital deals in Africa was 5.2 billion USD. While this constitutes a three fold increase over the previous year, the total amount is only around one percent of the total global value of venture capital deals (AVCA, 2022). Moreover, most venture capital deals are concentrated in countries such as South Africa, Egypt, Kenya, and Nigeria (Economist, 2022).

is a difficult task (Fafchamps & Woodruff, 2017; McKenzie & Sansone, 2019); and the partially subjective judgements that result allow ample room for bias. Third, the controlled but natural randomized control trial-like design allows us to identify causal effects of entrepreneurs' gender on loan officer decisions. These decisions are not confounded by other characteristics of the business or the entrepreneur that can also affect decisions without being observable to the researcher. In particular, our design allows us to control for any factor arising from the demand side for access to finance, so that we can focus exclusively on the supply side.[2]

Our design establishes the causal role of gender and team formation of entrepreneurs on loan officers' business evaluations. Our business pitches all include a founder, who has developed the business idea, and an implementer, who executes it. This serves two purposes. First, we disentangle whether any differential evaluation of the business potential stems either from gender bias in the assessment of the business idea, or from the perceived entrepreneurial ability and constraints an entrepreneur faces when operating a business by experimentally manipulating the gender of the founder and the implementer. Second, we compare gender biases in evaluations of individual entrepreneurs (sole proprietorship) versus teams of two entrepreneurs by varying whether the founder and the implementer are the same one or two different entrepreneurs. While the first part is important to increase our understanding of gender biases in access to finance, the second part is crucial for understanding the role of forming a team for entrepreneurial success, particularly in low income countries (Hsieh & Olken, 2014; Ulyssea, 2018). Most enterprises in these settings do not grow, but instead remain one-person small businesses (Calderón, Iacovone, & Juarez, 2017) although entrepreneurship education programs and incubators and accelerators that support start-ups strongly emphasize the formation of entrepreneurial teams for sustained business success.[3] A potential gender difference in returns to entrepreneurial team size may also contribute to under-representation of female businesses among larger firms in less developed countries.

Loan officers in our study evaluate business pitches along several dimensions. First, loan officers can invest into each business pitch presented, and their return depends on survival of the business. Second, they select the best performing business among five pitch decks evaluated. Third, loan officers can engage in additional costly screening to assess a business. In line with statistical discrimination (Arrow, 1973; Phelps, 1972), if loan officers are missing information about businesses

[2]Demand side factors such as differences in risk attitude, or willingness to ask or negotiate may also be an explanatory factor for observed gender differences in access to finance (Bowles, Babcock, & Lai, 2007; Card, Cardoso, & Kline, 2015; Croson & Gneezy, 2009; Niederle, 2016).

[3]From early entrepreneurship education programs to accelerators, the formation of an entrepreneurial team is often required (e.g., the "LaunchX" program for high school students and the "Berlin Startup School Accelerator"). Even the world's largest and most successful incubators, such as "YCombinator" and "Techstars", strongly encourage the formation of an entrepreneurial team prior to application. The same is true for successful African incubators like "The Baobab Network".

from a certain class of entrepreneurs, they should be willing to invest resources into obtaining this information, as long as the information is expected to change the prior belief and the expected outcome. The evaluations above are incentivized based on the real-life business performance of the pitching start-ups around two years after pitching the business idea in a business plan competition. Additionally, we elicit non-incentivized probabilistic beliefs about business success and a subjective measure of the perceived quality of the business idea. The selected outcomes are informative about the entire distribution of loan officers' evaluations of the future business profitability. This allows us to relate our findings to both equity and debt financing, which are arguably concerned with different aspects of firm performance: business success is important for high returns on equity and firm survival for continued loan repayment.

We find a sizable gender bias for businesses run by individual entrepreneurs. Loan officers invest around 7 percent less in businesses by female entrepreneurs, they are 27 percent less likely to select a pitch as the best businesses when it is pitched by a female entrepreneur, and they consider the probability of failure to be 18 percent higher when the same idea is pitched by a female entrepreneur than when it is pitched by a male. These effects are more pronounced among loan officers who hold gender biased attitudes, who are less experienced, and who are female. The observed premium for individual male entrepreneurs over individual female entrepreneurs is in line with the type of clients loan officers usually interact with: 70 percent are male. The remaining outcomes allow us to examine potential mechanisms driving the result. First, there is no gender difference in the subjective evaluation of business idea quality, implying that the gender bias is not driven by animus against ideas developed by women. Second, the absence of gender disparities in the costly screening process suggests that loan officers do not perceive that they disproportionately lack information about female-led enterprises. Instead, we conjecture that the observed gender bias stems from differential assessments of women's entrepreneurial ability or potentially greater external constraints when running a business. A supplementary survey of 179 loan officers from another bank supports these findings and suggests that loan officers believe that it is rather external constraints—mostly family-related—that drive this effect. In contrast, loan officer beliefs about implementation ability do not differ by the gender of entrepreneurs.

We do not observe a similar gender bias in loan officer's evaluations of teams of two entrepreneurs. Loan officers do not invest differently in businesses when they were founded or implemented by an entrepreneurial team including a female. This null result is not produced lack of comprehension, attention or effort, and it does not stem from limited variance in the outcome variables or floor or ceiling effects. Further, investment behavior is correlated with other proxies of business idea quality at the individual level, so we are confident in the measure's validity. We do find

some indication of a different type of a bias at the top, a penalty in the evaluation of mixed-gender teams. A business pitch from mixed-gender teams is less likely to be selected as the best-performing business, although the result does not always reach statistical significance. Comparing teams to individual entrepreneurs shows that loan officers do not evaluate their business pitches differently, on average. Our results allow us to rule out that the contrasting results for individuals and teams are driven by relative unfamiliarity or by different preferences or beliefs of loan officers about either business type. First, loan officers do not demand more information about teams. Second, loan officers evaluate the prospective profitability of teams and individuals equally. Taken together, despite the fact that almost all applications the bank typically processes are from individual applicants, teams would not likely suffer any penalty, nor receive a premium.

We contribute to three strands of the literature. First, we contribute to the literature on gender bias in entrepreneurial finance. Previous work has documented an investor bias against female entrepreneurs (Ewens & Townsend, 2020; Guzman & Kacperczyk, 2019; Hebert, 2023) and that female borrowers often face tighter credit availability or less favorable loan terms (Agier & Szafarz, 2013; Alesina, Lotti, & Mistrulli, 2013; Asiedu, Freeman, & Nti-Addae, 2012; Bellucci, Borisov, & Zazzaro, 2010; Mascia & Rossi, 2017; Muravyev, Talavera, & Schäfer, 2009). Recent experimental work has pinpointed loan officers' gender bias as a source of gender disparities in entrepreneurial finance (Alibhai et al., 2019; Brock & De Haas, 2023; Zhang, 2023). Closest to our study, Brock and De Haas (2023) provide causal evidence for gender discrimination in entrepreneurial lending. Using data from a lab-in- the-field experiment in Turkey, they document that loan officers indirectly discriminate against female loan applicants by requesting more loan guarantees. These effects are concentrated among female businesses in traditionally male industries, suggesting that gender stereotypes drive this discrimination. Nevertheless, they do not find direct discrimination against female applicants. We contribute to this literature by cleanly identifying supply side factors in gender bias. Further, we advance this literature by investigating mechanisms underlying potential bias beyond differential treatment of male and female loan applicants. First, we examine whether differential treatment is the result of discrimination in the evaluation of business ideas or whether it arises from beliefs about women's abilities and constraints in the implementation of the business idea. Our supplementary survey allows us to distinguish between the latter two. Further, we study differences in screening efforts for male and female entrepreneurs. This differentiation is particularly important for tailoring policies to increase women's participation in credit markets. Lastly, we study how the formation of entrepreneurial teams interacts with gender bias.

Second, we contribute to the literature on the determinants and biases in predicting business success and how this affects access to finance. Prediction of entrepreneurial success is a difficult

task for both human experts and state-of-the-art machine learning approaches (Fafchamps & Woodruff, 2017; McKenzie & Sansone, 2019). Nevertheless, loan officers' ability to properly evaluate potential business success is key for the efficiency of entrepreneurial finance, in particular when information on the business and loan applicant is scarce. Information scarcity is prevalent in many low-income countries without existing credit registries (Djankov, McLiesh, & Shleifer, 2007) or systematic business accounts. Subjective evaluations are prone to gender biases (Lee & Huang, 2018) and information-scarce credit markets allow for animus driven behavior and favoritism (Blanchflower, Levine, & Zimmerman, 2003; Younkin & Kuppuswamy, 2018). Cole, Kanz, and Klapper (2015) show that high-powered incentives induce loan officers to invest more effort in screening loan applications, while volume-based incentives can lead loan officers to overlook valuable soft information (Agarwal & Ben-David, 2018). Even status symbols like obesity (which is perceived as a signal of wealth in many low-income settings) affect loan approval decisions in such a low-information setting (Macchi, 2023). Reducing information frictions between the borrower and the loan officer by cultural proximity (Fisman, Paravisini, & Vig, 2017) or being of the same gender (Beck, Behr, & Madestam, 2018; Jurajda & Janhuba, 2018) improves access to finance, loan conditions, and repayment. We contribute to this literature by introducing gender bias as a possible confounding factor in the evaluation of business potential.

Last, we also extend the understanding of underlying sources of gender bias in access to finance. Typically, studies aim to provide evidence that supports either taste-based (Becker, 1957) or belief-based (Arrow, 1973; Phelps, 1972) types of discrimination (Gonzales Martinez et al., 2020; Macchi, 2023; Montoya et al., 2020). Our subjective assessment about the business idea and the incentivized information acquisition task allow us to make inference about the role of taste- and belief-based discrimination. Further, our novel design allows us to separate loan officers' evaluations of the idea quality from the business implementation capacity, and to locate the sources of loan officer biases in the external constraints of female entrepreneurs, rather than in the quality of their ideas or in their ability to implement the business. Understanding these underpinnings of bias allows policy makers to design effective tools to address the inequalities.

2 Experimental Design

In our lab-in-the-field experiment in Uganda, loan officers evaluate a set of business pitch decks from start-up enterprises. Our objective is to examine whether their evaluations differ along two dimensions: the gender of the entrepreneur and the formation of entrepreneurial teams. With regard to gender, our study design enables us to differentiate whether any observed differences stem from

varying assessments of the business idea itself or of the implementation challenges and capabilities of the entrepreneur. Loan officers in our study evaluate business ideas using two measures: first, they determine whether or not to invest in the showcased business and second, they select the best performing business among all the presented pitch decks. These decisions are incentivized based on the real-life performance of the start-up enterprises that created the business pitches. Additionally, we analyze differences in loan officer's screening effort and non-incentivized beliefs about business idea quality and business performance.

2.1 Sample and Setting

We partner with a large Ugandan commercial bank that specializes in lending to small-scale businesses and entrepreneurs. We selected 28 branches that employ more than eight loan officers, and that are feasible to reach in a one-day trip from the capital, Kampala, or other major Ugandan cities. Our sample includes 35 percent of all branches of the bank and about 40 percent of all its loan officers.[4] In each branch, we invite all loan officers who handle business-related loans to participate in our experiment, without informing them about the aims of the study. Participation was entirely voluntary and non-participation was negligible.[5] Before commencing the experiment, loan officers were informed that their involvement would entail evaluating various real-world business ideas. The facilitator introduced the survey structure and question format, ensuring clarity on the incentivized questions and providing guidance on navigating the survey sliders to select the desired answers (see Appendix A.3 for details). Our final sample consists of 451 loan officers. They are, on average, 34 years old, 55 percent are female, and they have an average of 6.7 years of experience in the position.

The business pitches the loan officers evaluate in our experimental sessions were presented by graduates of an entrepreneurship academy at a business plan competition.[6] For each business pitch, we have detailed information on the team of entrepreneurs and their business performance around two years after the business idea was pitched. The evaluation decisions of the loan officers in our experiment are incentivized based on real-life information on business performance from the start-up businesses that have pitched the ideas.[7]

[4]The bank rotates loan officers to another branch every two to three years, also rotating between rural areas and cities. This reduces potential selection concerns of loan officers in our study.

[5]Only eight of the present loan officers did not participate in the experimental sessions due to other work commitments.

[6]In Bartos et al. (2023), we assess the impact of entrepreneurship academies on the business performance of these start-ups. Entrepreneurship academies are run at several Ugandan universities with students interested in pursuing entrepreneurial careers. We follow these nascent entrepreneurs from their application to the entrepreneurship academy until around two years after they have completed the training and participated in the business plan competition.

[7]We received informed consent from all founders that their pitch decks can be used for the purposes of a research study.

We selected five pitch decks from a sample of 58 decks that were pitched at the business plan competition. First, we excluded pitch decks that did not contain enough information about (expected) business performance for evaluators to make an informed decision. Second, we excluded ideas that were clearly perceived as either male or female businesses in our pre-testing. We additionally validated our identifying assumption that participants cannot infer the gender of the entrepreneurial teams solely by looking at their idea in a survey with 38 Ugandan university students.[8] We do not detect strong beliefs about the gender of the business owner(s): While actual pitch decks by males or male teams were evaluated as more male relative to female or female team businesses (p=0.06), the modal belief is that the idea came from a team with an equal proportion of men and women (63 percent).

2.2 Conceptual Framework

For our evaluation experiment, we standardize the presentation of the business pitches. All pitch decks are presented with a founder and an implementer (i.e., the *CEO* or *manager*). We make it clear that the founder developed the business idea, while the implementer executes the business idea. The founder and the implementer may or may not be the same person.

We model perceived business performance (B) as a function of both the quality of the business idea (Q) and the implementation of the idea (I). To understand gender-specific business evaluations, both parameters are gender-specific $g = \{M, F\}$, such that we have $B(Q_g, I_g)$. Varying the gender of both dimensions allows us to disentangle whether a gender-specific business evaluation originates from a differential evaluation of the idea quality itself, or from different perceptions about the potential of an entrepreneur to implement it. While differences in evaluations of idea quality indicate gender bias, different beliefs about the potential to successfully implement an idea may either stem from gender-specific beliefs about (external) constraints or the (personal) ability to implement the idea. To understand how team formation influences business evaluations, in particular if there are gender-specific evaluations for female and male businesses, we vary whether the businesses are founded by an individual entrepreneur or by a team of two entrepreneurs.

[8] We first removed all identifiers of the actual entrepreneurs from all pitch decks. Then, each student evaluated a randomly selected subset of 20 pitch decks out of the full sample of 58 pitches. We asked the students whether they thought "the owner or the group of owners is more likely to be [all male / mostly male / male and female in equal proportion / mostly female / all female]".

2.3 Gender and Entrepreneur(s) - Exogenous Variations

We exogenously vary two components in the evaluation of the business performance: First, we vary the gender of both the founder and the implementer and compare the loan officer's business evaluations across these four founder-implementer gender combinations. Second, for founder-implementer combinations with the same gender, we vary whether the business is proposed by a team of two entrepreneurs or by an individual entrepreneur.

Specifically, a loan officer *i* evaluates the business success $B_i^p(Q_g, I_g)$ of pitch deck p. Every loan officer sees the same five pitch decks in the same sequence. We randomly assign the founder-implementer gender combinations for each pitch deck across loan officers, resulting in a between-subject design. This means that for a pitch deck p, a loan officer i either evaluates $B_i^p(Q_M, I_M)$, $B_i^p(Q_M, I_F)$, $B_i^p(Q_F, I_F)$, or $B_i^p(Q_F, I_M)$.

We vary the gender of the founder and implementer in the following way: We remove all personal information from each pitch deck, i.e., all information on the entrepreneurs proposing this business pitch. In the next step, we create four versions of the pitch deck. We assign a founder-implementer gender combination to each of the four anonymized pitch deck clones. For this, we vary the dimensions of the *founder's* gender and *implementer's* gender (male vs. female) in a 2x2 design. The genders of the founder and implementer are revealed by their names on the pitch deck (without photos, or any additional information). We made sure that the names used are clearly associated with one gender only and that ethnicity, religion, socio-economic status, and other characteristics could not be inferred from them.[9]

We then vary the team formation of entrepreneurs by introducing a fifth pitch deck clone, in which the founder and the implementer are the same person, i.e., an individual entrepreneur. There is a 50 percent probability that the founder is male or female. For each pitch deck p, we randomly assign the five-pitch deck clones across participants. We assign four-pitch deck clones of teams of two entrepreneurs with four different founder-implementer gender combinations and one pitch deck clone of an individual entrepreneur with a random gender distribution.[10]

[9] Kreisman and Smith (2023) show that Black US individuals with distinctively Black names exhibit worse educational outcomes. To ensure that the names we use signal gender unambiguously and are not confounded by other signals, we selected them as follows: The name is either a real name of a team member or a name of another participant at the entrepreneurship academy. We tested a set of 30 names of academy graduates among 10 Ugandan natives, and selected five sets of names (two female and two male names each) that are sufficiently neutral so that respondents could not infer anything about ethnicity, socio-economic status, or level of education. We excluded names for which gender was not clear to all respondents. All names we used are associated with a Christian religion, so they are not confounded by religious identity. See the list of all names in Appendix Table A1.

[10] Loan officer characteristics are balanced across the two gender realizations (see Appendix Table A2). All other manipulations are within-subject.

2.4 Evaluation of Business Ideas

We elicit both incentivized and unincentivized decisions to evaluate the business ideas. Our two main outcome variables are the incentivized measures *Investment* and *Best business*. Both decisions are incentivized based on the real-life business performance of a business as follows. *Investment* is a continuous variable stating the amount invested in each business pitched. Loan officers are endowed with 5,000 UGX that they can invest (in increments of 500 UGX) in each business.[11] The investment amount is doubled if the corresponding real-life business reports positive profits around two years after the idea was pitched. The investment is lost if this business reports negative profits or no longer exists. Investors keep the part of the endowment they do not invest. This outcome captures loan officers' ability to predict business survival for each pitch deck.

After each pitch deck has been evaluated, participants select the *Best business* that they believe has generated the highest profits. Loan officers receive a fixed 5,000 UGX bonus payment if they identify the real-life business with the highest profits and nothing otherwise. This outcome captures loan officers' ability to identify the best performing business.

To gain insights into mechanisms, we surprise loan officers with additional costly screening options. Investment payout is based on one selected pitch deck, and loan officers have the option to purchase further information on the entrepreneurs and/or the business. Subsequently, they may revise their initial investment decision for the payoff-relevant pitch deck. We present a list of information items about the entrepreneur background and the business.[12] Loan officers state which information they would need to best assess the pitch deck, and they decide whether and which pieces of information they want to purchase. Each piece of information costs a fixed amount of 200 UGX.[13] The decision to purchase information is incentive-compatible. Participants know that they will have a chance to revise their investment decision after the opportunity to obtain additional information. It is thus in their best interests to select the information they deem relevant. We generate the following outcome variables: (i) an indicator variable on whether a loan officer purchased any information, (ii) the number of information pieces purchased, and (iii) indicator variables on whether a loan officer purchased each piece of information.

[11] This amount corresponded to around 1.28 EUR in December 2022 when the experimental sessions were implemented with an exchange rate of 3,858 UGX/EUR.

[12] The following items are displayed on the list: (1) All team members owning the business, (2) Professional references of the business owners, (3) Professional experience of the business owners, (4) Professional network of the creators, (5) Financial support this business has received from family members, (6) External financing obtained, and (7) Volume of sales, revenues, and profit margins.

[13] As we only have a subset of this information available for the payoff-relevant pitch deck, loan officers only pay for those selected categories for which the information is actually available.

The following unincentivized measures are our secondary outcome variables. *Idea quality* is based on two survey questions for each pitch deck, i.e., whether the loan officer agrees that *the business meets a need or solves a problem in Uganda* and *that there is a market for this business idea in Uganda. Idea quality* is the average of both questions, which are answered on a scale from 0 to 100. *Beliefs about profits* for each pitch deck are measured by the probability distribution across the three options that this business idea will either (i) fail within the first year, (ii) survive in the first year and make small profits, or (iii) survive in the first year and make large profits.

Finally, we asked three questions on gender norms (Scholz et al., 2014)[14], and collected basic demographic information on the loan officers (gender, age, years of experience).

2.5 Procedures

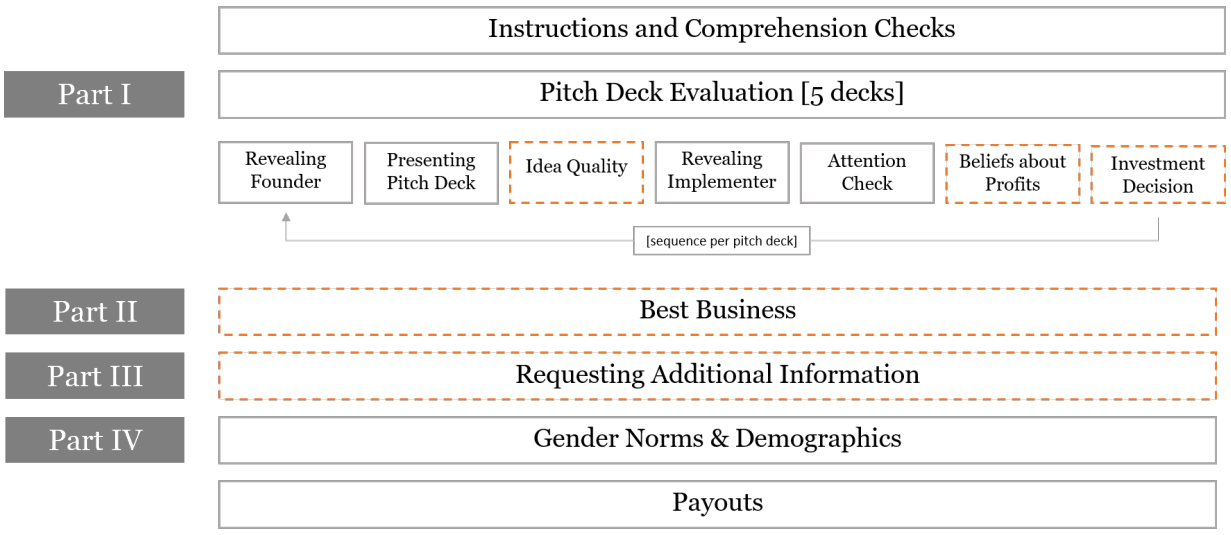
The experimental sessions were conducted at the branch offices of our partner institution. We visited the branches outside regular business hours to avoid client traffic or other distractions during the experimental sessions. Experimental instructions were explained by the research team using flip chart illustrations (see Appendix A.3). We ensured loan officers' understanding of the instructions by asking two comprehension questions.[15] All decisions were collected in a survey on a digital device. We either used the loan officers' personal workstations or provided tablets. Loan officers could proceed through the survey at their own pace. A research team member assisted them if needed. The experiment was programmed in Qualtrics.

The survey is organized in four parts (see Figure 1). In Part I, loan officers evaluate five pitch decks. Each pitch deck is presented in the same sequence: loan officers 1) learn who the founder of the business idea is, 2) see the business pitch, 3) evaluate the idea quality (note that this is independent of the identity of the implementer), 4) learn who the implementer of the idea is, 5) pass an attention check on the gender allocation for the founder and implementer[16], 6) indicate their probabilistic beliefs about business success, and 7) state the amount they would like to invest in the business. All pitch decks are presented in the same sequence so as not to confound the gender variation within each pitch deck with potential order effects from variations in the sequence. In

[14] We asked Questions R1c, R1d, R2b from Scholz et al. (2014) on how much the participant agrees with the following statements on a 5-point Likert scale coded from 1. ...completely disagree to 5. ...completely agree: (i) *A man's job is to earn money; a woman's job is to look after the home and family.*, (ii) *A job is all right, but what most women really want is a home and children.*, and (iii) *Family life suffers when the woman has a full-time job.*

[15] Questions are: (i) "Imagine that you invest 2,500 UGX into the business and keep 2,500 UGX. The business reported that it still exists and makes profits. How much do you have in total?", and (ii) "Imagine that you invest 4,000 UGX into the business and keep 1,000 UGX. The business reported that it does not exist anymore. How much will you have in total?". Loan officers were only allowed to proceed when they answered both questions correctly. Otherwise, the instructions were repeated.

[16] Participants see three statements about the description of the idea and the founding team. They can only proceed after indicating the correct answer. The check is only included in a subset of pitch deck evaluations.



Notes. This figure presents an overview of the study design. The outcome measures are displayed in dashed boxes.

Figure 1: Design Overview

Part II, loan officers select the business pitch they think has performed best. In Part III, they can request additional information for the selected payoff-relevant pitch deck, prior to a surprise option to revise their investment choice for this pitch deck. Lastly, in Part IV, we elicit gender norms and socio-demographics. See the full wording of the survey and screenshots in Appendix A.4.

A loan officer's final payoff is comprised of four components. First, they receive a participation fee of 5,000 UGX. Second, they receive an initial endowment of 5,000 UGX; they keep the amount that they did not invest in the payoff-relevant business, and the return from the amount invested into this business. Third, the amount for purchased information is subtracted from the participation fee. Fourth, the loan officers receive a bonus payment of 5,000 UGX if they correctly identify the best performing business. Earnings were delivered via mobile money shortly after the experimental session. Average payouts for the one-hour session were 13,472 UGX, which is in the range of the average hourly wage (above 10,000 UGX for the loan officers in our sample).

3 Results

We document a bias against individual female businesses as opposed to individual male businesses and no gender bias for teams of entrepreneurs. The bias against individual female businesses seems to be driven by beliefs about implementation ability or implementation constraints, possibly magnified by individually held gender stereotypes. We first present results for individual entrepreneurs and then turn to results for entrepreneurial teams. Finally, we compare decisions for individual entrepreneurs and teams.

3.1 Gender Bias in the Evaluation of Individual Entrepreneurs

Loan officers exhibit bias against individual female entrepreneurs in their investment decisions. We report the regression results in Panel A of Table 1. Each loan officer evaluates one pitch deck of an individual entrepreneur, half are female and half male. The dependent variable is the amount (in UGX) invested in each pitch deck. The regressions report coefficients for indicators for a pitch deck of a female entrepreneur. The excluded category is a pitch deck of a male entrepreneur. Each regression includes pitch deck fixed effects. We report robust standard errors. On average, loan officers allocate 245 UGX (p=0.04) less to female businesses. The effect represents seven percent of the average amount invested in business ideas of male entrepreneurs (3,491 UGX). The result is robust to including individual controls (Table A3) and to removing the most inaccurate loan officers, i.e., the ten percent of the participants who took the most clicks to answer the comprehension questions correctly (Table A4). The gender difference in investment rates is present throughout the entire choice distribution (Figure A1). Our results imply that loan officers expect gender differences in the ability of businesses to generate profit, as we detail below.

In line with the gender bias observed across the investment distribution, we also observe gender bias in the probability of female businesses being selected as the best performing business. Using a linear probability model with a similar regression framework, a female entrepreneur's business is 7 percentage points (p=0.052) less likely to be selected as the best, relative to an otherwise identical business of a male entrepreneur (Table 1, Panel B), corresponding to a reduction of 26.9 percent of the average of a male entrepreneur's business (26.4 percent). This effect is robust to regression specifications with individual controls (Table A3). When we focus on the sample of accurate participants, we lack statistical power to detect significant effects, but the point estimate is very close to that detected in the full sample and both estimates cannot be distinguished statistically (Table A4). These results are also reflected in the non-incentivized belief elicitation about business success (Table A5). Female businesses are predicted to have failed with a 4.08 percentage points (Column 1, p=0.063) higher probability than an otherwise identical male business, corresponding to 18.2 percent of the average of a male business (22.5 percent). Seventy percent of this effect stems from loan officers predicting business failure rather than small profits, although this reduction is not statistically significant on its own.

After the investment decisions, loan officers have an opportunity to acquire additional information about the payoff-relevant pitch deck and to reconsider their investment choice. While the point estimate for requesting additional information is positive for female businesses (Table 2), it is statistically insignificant. The lack of a significant effect prevents us from concluding whether

Table 1: Investment and Best Business Decision [Individual Entrepreneurs]

Panel A: Investment		Gender bias		LO gender		Experience	
		Weak	Strong	Female	Male	Low	High
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Female Entrepreneur	-245.24**	-139.47	-355.85**	-289.02	-202.74	-265.18	-233.11
	(119.28)	(169.03)	(170.25)	(179.75)	(160.33)	(184.96)	(161.94)
Mean Dep. Var.	3,490.74	3,342.11	3,656.86	3,333.33	3,609.76	3,442.71	3,529.17
Observations	451	234	217	201	250	199	252
Panel B: Best Business							
Female Entrepreneur	-0.07*	-0.03	-0.11**	-0.10*	-0.04	-0.13**	-0.04
	(0.04)	(0.05)	(0.05)	(0.06)	(0.05)	(0.06)	(0.05)
Mean Dep. Var.	0.26	0.25	0.21	0.24	0.28	0.33	0.21
Observations	451	234	217	201	250	199	252

Notes. OLS Regressions of the dependent variable *Investment* (Panel A) or *Best Business* (Panel B) on the gender of the individual entrepreneur who founded and implemented the business. The sample consists of individual business pitch decks only, i.e. one pitch deck per loan officer. Panel A reports the incentivized decision of how much to invest in the pitch deck business from 0-5,000 UGX. Panel B reports the incentivized decision of selecting the best business idea; it is a probability. Column (1) reports the average effect, and Columns (2)-(7) split the observations according to different relevant observable characteristics. Columns (2)-(3) split by gender bias following International Social Survey Programme gender bias metrics (see footnote 14). The sample is split at the median. (4)-(5) are split according to the self-reported gender of the participant, and (6)-(7) are split at the median years of experience. *Mean Dep. Var* indicates the mean of the dependent variable of the reference group. Standard errors are heteroskedasticity-robust and reported in parentheses. The table includes pitch deck FEs in both panels. Results are robust to correcting for multiple hypothesis testing accounting for the fact that we focus on two main outcome variables. Using the method by Barsbai et al. (2021), Column 1 corrected p-values are (p=0.083) and (p=0.053) for investment and best business, respectively. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

the observed gender bias is driven by statistical discrimination (Arrow, 1973; Phelps, 1972). Nevertheless, the null effect of a founder's gender in the loan officer's assessment of the quality of the research idea in Table A6 seems to speak against the idea that taste-based discrimination drives the effect (Becker, 1957). The null result on idea quality also supports the hypothesis that loan officers' gender bias can be attributed to strong beliefs about gender differences in implementation ability or in the implementation constraints female-led businesses face. The idea quality measure is not incentivized and its validity may be limited in contrast to the incentivized measures. Nevertheless, it correlates with the incentivized measures in the expected direction (Table A8).

We also document substantial heterogeneity in the magnitude of the bias by loan officer characteristics. First, the bias against female businesses using incentivized outcomes is most pronounced among loan officers who also exhibit greater general gender bias as measured by aggregated and averaged responses to three selected International Social Survey Programme questions on gender norms (Table 1, Panels A and B, Columns 2-3) (Scholz et al., 2014). While

Table 2: Information Request [Individual Entrepreneurs]

	1[Request additional information]								
	Any Info	# Info	Team Member	References	Experience	Network	Family Finance	External Finance	Sales
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Female Entrepreneur	0.06	0.04	-0.01	-0.03	-0.01	-0.03	0.04	0.06	0.01
	(0.10)	(0.26)	(0.06)	(0.04)	(0.06)	(0.05)	(0.05)	(0.06)	(0.07)
Mean Dep. Var.	0.37	0.72	0.12	0.10	0.10	0.10	0.05	0.10	0.15
Observations	86	86	86	86	86	86	86	86	86

Notes. OLS regressions of the decision to request additional information about the business on the gender of the individual entrepreneur who founded and implemented the business. The sample consists of individual business pitches only, i.e. around 20 percent of loan officers who were randomly assigned this pitch deck variant for the payoff-relevant pitch deck. Column (1) reports the binary option whether the participant decided to request additional information. Column (2) reports the total number of pieces of information requested by a participant. Columns (3)-(9) report the results for different pieces of information: *all team members owning the business, professional references for business owners, professional experience of the business owners, professional network of the creators, financial support from family members received by this business, external financing obtained, volume of sales, revenues, profit margins*, and *none of the above. Mean Dep. Var* indicates the mean of the dependent variable of the reference group. Standard errors are heteroskedasticity-robust and reported in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

we do not find support for a general animus against female-led businesses, this finding indicates that the observed gender bias is reinforced by general gender-biased stereotypes: Loan officers exhibiting stronger general gender bias may hold stronger beliefs about gender differences in business implementation.[17]

Second, the effect is concentrated among female loan officers, but it is only statistically significant for the best business choice in this sub-sample (Table 1, Columns 4-5). Even though it is not statistically distinguishable from the insignificant bias of male loan officers, the greater bias of females is in line with the so-called queen bee syndrome (Staines, Tavris, & Jayaratne, 1974).[18] In this syndrome, women who achieve individual success in male-dominated environments and attain high-status positions are more prone to support gender stereotypes. While this effect has mostly been used to describe behavior in hierarchical labor market settings, a financial institution may exhibit similar power asymmetries between loan officers and loan applicants. Alternatively, in line with Bellucci, Borisov, and Zazzaro (2010), female loan officers may be more conservative in evaluations of less familiar businesses, like those founded and run by women. Unfortunately, we cannot separate these two explanations.

Third, loan officer experience does not seem to affect the general gender bias but it reduces discrimination at the top, i.e. when selecting the best performing business (Table 1, Panels A and

[17] Gender bias is measured based on three questions (see Footnote 14). The third question could also be misinterpreted and hence not reflect gender bias properly. Defining gender bias based only on the first two questions does not change the direction of coefficients or the magnitude of results (Table A7).

[18] Similarly, Bagues and Esteve-Volart (2010) document that female candidates for positions in Spanish civil service are less likely to be hired if a hiring committee has a higher percentage of females. The evidence in other settings is mixed, however (Kunze & Miller, 2017).

B, Columns 6-7). However, given the relatively large variance spanning between very recently employed loan officers and one officer serving 23 years, we see that the bias in selecting the best business is only reduced for the above median group with at least six years of experience. The finding should by no means be interpreted causally, as we cannot separate experience effects from, for example, selection. Even if the causal link is the dominant factor, the effect only occurs in the medium to long term and does not result in eliminating the bias entirely.

The clear pattern documenting gender bias is further supported by the fact that the results are not driven by limited comprehension, by limited effort on the side of the participants, or by other confounds. The patterns in responses are consistent across different variables capturing project quality. Examining correlations between the investment measure and other outcomes such as our second incentivized measure of selecting the best performing business, a non-incentivized rating of idea quality, or a probabilistic belief of high business profits, shows that all of the variables are positively correlated, and the Pearson correlation coefficients are highly statistically significant at $p<0.01$ (Table A8). Reassuringly, the probabilistic belief of an under-performing business in terms of profits is negatively and significantly ($p<0.01$) correlated with these variables. Finally, while clearly gender specific, the names assigned to the pitch decks were common enough not to be attributable to a specific demographic characteristic. This implies that other characteristics are unlikely to confound the discussed gender effect.

In sum, we observe a robust pattern of gender bias disfavoring individual female entrepreneurs by Ugandan loan officers. The effect is strongest for loan officers exhibiting gender bias in other domains and it seems to be stronger for female and less experienced loan officers. The bias is not related to beliefs about quality of business ideas but is rather driven by differences in beliefs about implementation ability or constraints. We disentangle these latter beliefs further in our supplementary survey in Section 4.

3.2 No Gender Bias in the Evaluation of Entrepreneurial Teams

We do not observe systematic gender bias in incentivized investment decisions when loan officers evaluate entrepreneurial teams with two members, a founder and an implementer. We also establish that the null result is well identified and sufficiently statistically powered, and it is not driven by lack of variance in the data, by limited accuracy of participants, or by limited quality of responses.

First, we find no gender difference in the incentivized investment decision of loan officers. Our results imply that loan officers do not expect there to be gender differences in the ability of teams of entrepreneurs to generate profit. Panel A of Table 3 presents the results in a regression analysis.

The dependent variable is the amount (in UGX) invested in each pitch deck. The regressions report coefficients for indicators for pitch decks with a female founder, a female implementer, and with both a female founder and female implementer.[19] The excluded category is a pitch deck with a male founder and a male implementer. Each regression includes individual and pitch deck fixed effects and standard errors are clustered at the individual level. We also report an F-statistic and a p-value of a test of the sum of all three coefficients; in other words, comparing the difference between a business with a male founder and implementer to one with a female founder and implementer. Column 1 of Panel A shows that, on average, there is no statistically significant effect of either of the gender combinations. The point estimates are very small, not exceeding two percent of the mean of the dependent variable. We also do not observe any difference in the cumulative distributions of the different founder and implementer combinations (Figure A2).

Examining heterogeneity, we present the result of a regression specification by the gender bias of loan officers, by their own gender, and their years of experience. The null result documented in the aggregate sample also holds true for all sub-groups analyses. If anything, we observe a marginally statistically significant positive effect for a business with female founder and male implementer relative to one with a male founder and implementer among loan officers with strong general gender bias (p=0.097), but this does not differ from what would be expected statistically and it is not robust to a modified measure of the gender bias.[20]

Reassuringly, as in the case of individual entrepreneurs, we document that the result is not driven by limited comprehension or by limited effort on the side of the participants. First, Table A10 shows that the cross-correlations across different variables capturing project quality move in the same direction and are similar to those observed for single businesses (Table A8). All Pearson correlation coefficients are highly statistically significant at $p<0.01$. Second, the investment measure is incentivized, which motivates loan officers to pay attention and to carefully consider their choices. Removing the choices made by the ten percent least accurate individuals (who took the most clicks to answer the comprehension questions correctly) does not change the results (Table A11). Third, the null result is not a product of a lack of variance in the dependent variable. Histograms in Figure A3 show that there is sufficient variation, and the distributions are continuous. Fourth, even though all projects are evaluated positively with investments averaging 3,317 UGX, there is a statistically

[19] This specification deviates from the specification in the pre-analysis plan, where we assumed no differences between mixed-gender and same-gender teams. Because this assumption does not hold in the data, we deviated from the pre-specified analysis and present the results for the investment decision in Table A9. With these strong assumptions, our conclusions for teams remain unchanged. We detail the deviations from the pre-analysis plan in Appendix A.6.

[20] As in Footnote 17, we define gender bias based on the first two questions. This does not change the direction of coefficients or the magnitude of results, but renders the female founder coefficient insignificant in the case of loan officers with strong gender biases (Table A7).

Table 3: Investment and Best Business Decision [Entrepreneurial Teams]

Panel A: Investment		Gender bias		LO gender		Experience	
		Weak	Strong	Female	Male	Low	High
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Female Founder	7.27	-179.28	201.81*	-86.33	77.00	-59.94	64.89
	(86.11)	(120.96)	(121.12)	(123.87)	(118.89)	(123.70)	(119.37)
Female Implementer	-59.54	-97.11	-27.13	-188.07	38.94	-110.85	-12.41
	(83.68)	(126.27)	(108.70)	(130.93)	(106.57)	(123.38)	(116.28)
Female Founder&Implementer	40.33	137.75	-54.46	209.18	-93.08	85.75	5.38
	(120.58)	(181.80)	(157.82)	(190.10)	(154.91)	(182.20)	(163.65)
Mean Dep. Var.	3,352.21	3,395.60	3,308.33	3,353.50	3,351.22	3,303.03	3,393.40
F-Statistic	0.02	1.02	0.91	0.25	0.03	0.43	0.20
P-Value	0.90	0.31	0.34	0.62	0.86	0.51	0.66
Observations	1804	936	868	804	1000	796	1008
Panel B: Best Business							
Female Founder	-0.01	-0.07*	0.05	-0.06	0.03	-0.00	-0.02
	(0.03)	(0.04)	(0.04)	(0.05)	(0.04)	(0.04)	(0.04)
Female Implementer	-0.02	-0.04	-0.00	-0.09*	0.03	-0.06	0.01
	(0.03)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Female Founder&Implementer	0.08**	0.14**	0.03	0.18***	0.00	0.08	0.09
	(0.04)	(0.06)	(0.06)	(0.06)	(0.05)	(0.06)	(0.06)
Mean Dep. Var.	0.21	0.23	0.18	0.27	0.16	0.21	0.21
F-Statistic	2.37	0.27	2.45	0.43	2.24	0.15	2.98
P-Value	0.12	0.60	0.12	0.51	0.14	0.70	0.09
Observations	1804	936	868	804	1000	796	1008

Notes. OLS Regressions of the dependent variable *Investment* (Panel A) or *Best Business* (Panel B) on the gender of the founder and the implementer in teams. The sample consists of entrepreneurial team pitches only, i.e. four pitch decks per loan officer. Panel A reports the incentivized decision of how much to invest in the pitch deck business from 0-5,000 UGX. Panel B reports the incentivized decision to select the best business idea; it is a probability. Column (1) reports the average effect, and Columns (2)-(7) split the observations according to different relevant observable characteristics. (2)-(3) split by gender bias following International Social Survey Programme gender bias metrics (see footnote 14). The sample is split at the median. (4)-(5) are split according to the self-reported gender of the participant, and (6)-(7) are split at the median years of experience. *Mean Dep. Var* indicates the mean of the dependent variable of the reference group. Standard errors are clustered at the individual level and reported in parentheses. The table includes pitch deck and individual FEs in Panel A and pitch deck FEs in Panel B. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

significant variance between investment across projects with average investments ranging from 3,065 UGX for pitch deck 2 to 3,460 UGX for pitch deck 4 ($p<0.01$, Table A12). Ceiling or floor effects thus cannot explain the null result, either. Table A12 shows that the null result holds across all pitch decks, respectively. It is particularly notable that it holds even for pitch deck 1. This is the first investment decision the loan officers made. It is thus closest to a between subject design, which is least susceptible to possible experimenter demand or order effects. Even though we do not

randomize the order of pitch decks, pitch deck 1 ranks in the middle of the quality ranking, so it is unlikely to be an outlier.

In contrast to the gender bias documented for individual entrepreneurs in the previous subsection, we find no differential effect by gender or gender composition of a team of entrepreneurs on incentivized investment decisions. Our design allows us to conclude that the lack of bias is true for both business founders and implementers. The effect is not caused by lack of variation, low power, lack of accuracy or attention, or by other confounds. As the investment behavior is correlated with other proxies of business idea quality, we are confident that the measure is valid and that there is indeed no gender bias in these investment decisions.

3.3 Gender Composition in Entrepreneurial Teams Affects Selection of Top-performing Business

In Table 3, Panel B, we report effects of pitch deck gender composition on loan officer propensity to select a pitch deck as the best performing business from the five pitches evaluated. We use the same regression specification as in Panel A, but the dependent variable now is an indicator for a given project being selected as the best performing business. Thus, we no longer include individual fixed effects. Column 1 in Panel B presents aggregate results. It reveals a positive marginal effect of 8 percentage points for the female founder and implementer business (p=0.041). This effect is statistically significant when compared to either of the mixed-gender teams, as both are individually statistically insignificant but with a negative point estimate. The effect is substantial, totaling 47 percent of the mean for mixed-gender team compositions, which are selected as the best in 17 percent of cases. However, the overall effect of female entrepreneurial teams compared to male ones is insignificant (p=0.124), indicating no strict preference of female over male teams.

The aversion against mixed-gender teams emerges especially in two subgroups in Table 3: loan officers with weak gender biases (Column 2, Panel B) and female loan officers (Column 4, Panel B). It manifests through negative, similar-sized coefficients for the indicators for a female founder and a female implementer, a simultaneous positive coefficient for the interaction term of female founder and implementer, and an insignificant F-test comparing same-gender teams. In other words, while there is no difference in loan officer evaluations of all-female and all-male teams, there is a relative penalty for mixed-gender teams. Even though the bias against mixed-gender teams is not universal, it is present among a sizable group of loan officers.

Our results are robust to focusing on accurate loan officers (Table A11). The effect does not seem to be driven by a specific pitch deck when we study each pitch deck separately (Table A12).

Overall, while we observe a bias against selecting pitch decks with mixed-gender founder and implementer combinations, the results also do not reflect a general bias against a specific gender. This bias is concentrated among businesses on the right tail of the performance distribution; we only document it for selecting the best performing business, but not for the investment decisions that reflect business survival. Reassuringly, we observe a similar pattern for the non-incentivized probabilistic belief about business success: Though insignificant, the point estimates move in the same direction for the belief a business has earned large profits, while no such effect emerges for beliefs about small profit or failure of the business (Table A13).

Table 4: Information Request [Entrepreneurial Teams]

	1[Request additional information]								
	Any Info	# Info	Team Member	References	Experience	Network	Family Finance	External Finance	Sales
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Female Founder	-0.10	0.08	0.05	-0.03	0.06	0.05	0.02	0.00	-0.07
	(0.08)	(0.23)	(0.05)	(0.05)	(0.05)	(0.04)	(0.03)	(0.04)	(0.06)
Female Implementer	-0.09	-0.04	-0.01	-0.04	-0.01	0.02	0.01	0.02	-0.03
	(0.07)	(0.19)	(0.05)	(0.05)	(0.04)	(0.04)	(0.03)	(0.04)	(0.06)
Female Founder&Implementer	0.17	0.11	-0.02	0.01	-0.00	-0.04	0.01	-0.01	0.15
	(0.11)	(0.34)	(0.07)	(0.06)	(0.07)	(0.06)	(0.05)	(0.07)	(0.09)
Mean Dep. Var.	0.39	0.75	0.13	0.09	0.10	0.08	0.06	0.10	0.19
F-Statistic	0.03	0.34	0.17	1.03	0.82	0.38	0.93	0.13	0.36
P-Value	0.85	0.56	0.68	0.31	0.37	0.54	0.33	0.72	0.55
Observations	365	365	365	365	365	365	365	365	365

Notes. OLS regressions of the decision to request additional information about the business on the gender of the founder and the implementer in teams. The sample consists of entrepreneurial team pitches only, i.e. around 80 percent of loan officers who were randomly assigned pitch deck variants of entrepreneurial teams for the payoff-relevant pitch deck. Column (1) reports the binary option whether the participant decided to request additional information. Column (2) reports the total number of pieces of information requested by the participant. Columns (3)-(9) report the results for different pieces of information: *all team members owning the business, professional references for business owners, professional experience of the business owners, professional network of the creators, financial support from family members received by this business, external financing obtained, volume of sales, revenues, profit margins, and none of the above. Mean Dep. Var* indicates the mean of the dependent variable of the reference group. Standard errors are reported in parentheses and clustered at the individual level. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

A possible explanation may be that loan officers are relatively less familiar with entrepreneurial teams, and even less familiar with mixed-gender teams. Loan officers may feel less qualified to evaluate such teams, or their decisions may be noisier. Standard models of information processing would predict increased demand for any possible information about businesses that are less familiar, as the informational value of extra information would be higher, so long as it is expected to change prior beliefs. However, we find no effect on requesting additional information (Table 4). It is noteworthy that the average demand for information and the number of pieces of information requested does not differ across same-gender and mixed-gender teams. This speaks against a possible explanation that the bias is caused by loan officers being less familiar with mixed-gender business teams. Our supplementary survey (see Section 4) does not provide support for this either.

3.4 No Difference in Evaluations of Individuals and Teams

Finally, we show that there is no general difference in loan officers' evaluations of individual entrepreneurs and entrepreneurial teams. We observe a systematic gender bias against individual female entrepreneurs but not for entrepreneurial teams, so a natural question is how evaluations for teams and individual entrepreneurs differ. Table 5 answers the question by reporting results of a regression with an indicator for an individual entrepreneur. The omitted variable is an entrepreneurial team. The regressions control for pitch deck fixed effects and standard errors are clustered at the level of the loan officer. We examine the entire range of outcomes. Columns 1, 2, and 5 to 7 also control for individual fixed effects.

Table 5: Teams vs. Individuals

	Investment	Best Business	Requested Any Info	Requested # Info	P[failure]	P[small profits]	P[large profits]
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Individual	46.62	0.04	0.04	0.07	-0.69	0.39	0.29
	(62.18)	(0.03)	(0.06)	(0.17)	(1.10)	(1.20)	(1.36)
Mean Dep. Var.	3,316.52	0.19	0.39	0.72	25.23	39.85	34.91
Observations	2255	2255	451	451	2255	2255	2255

Notes. OLS Regressions. *Mean Dep. Var* indicates the mean of the dependent variable of the reference group. The analyses are based on the full sample of individual business and entrepreneurial team pitches, i.e. five pitches per loan officer. Pitch deck and individual FEs included and standard errors are clustered at the individual level in all columns except for (3)-(4), which have robust standard errors. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

The results show no systematically different treatment of individual entrepreneurs and teams for the investment decision, the probability of selecting a business as the best performing one, and all other outcomes of interest. All null results are relatively precisely estimated as not statistically significantly different from zero. Hence, we do not find support for entrepreneurial teams being treated differently from individuals.

We conjecture that neither unfamiliarity with entrepreneurial teams, nor a specific preference or belief about running a business in teams can explain the difference in gender bias documented for individual entrepreneurs and teams. Unfamiliarity would likely result in an increased demand for information and an increased variance over the profit distribution. Columns 4 to 8 do not support this hypothesis. Similarly, if loan officers had a specific preference for either individuals or teams, or if their beliefs about the quality of either type of business differed in general, we should observe systematically different outcomes. However, we observe no differences along all dimensions of interest.

4 Further Mechanisms for Observed Gender Bias from a Supplementary Survey

Our results allow us to locate the gender bias we observe in the beliefs about implementation constraints and entrepreneurial ability. To better understand the factors influencing the bias against individual female businesses, and why this bias does not appear for entrepreneurial teams, we conducted an additional online survey with 179 loan officers at a different major Ugandan commercial bank providing entrepreneurship finance. Our sample includes staff from all bank branches, accounting for 65 percent of all employees involved in banking, business, or credit services. Participation in the survey was incentivized by a fixed fee of 20,000 UGX (approximately 5 EUR). The modal duration of the survey was 30 minutes.

The survey focuses on understanding loan officers' beliefs regarding the challenges faced by entrepreneurs and their ability to successfully run a business. This allows us to document how these perceptions impact their evaluations of business success. We confirm that individual female entrepreneurs are evaluated differently and this stems from different perceptions of implementation constraints they face. However, we do not observe any differences in perceptions regarding their implementation abilities.

The supplementary survey design closely mirrors the main experiment, with a focus on different outcomes (see Appendix A.5 for the instructions). Loan officers see a reduced form of the same five business pitch decks used in the main experiment: the initial page of each pitch deck and a brief description of the business and the entrepreneurs. To study the impact of the entrepreneur's gender and team composition, we varied these aspects in two ways: female vs. male entrepreneur and whether the business is owned by an individual entrepreneur or a team. This results in five combinations: business owned by an individual male, an individual female, a team of two males, a team of two females, and a mixed-gender team. The sequence in which the pitch decks were presented is consistent with the main experiment. The gender of the entrepreneur and the team composition for each pitch deck were randomly assigned. As before, both dimensions are indicated by the entrepreneurs' names, and we used names from the same pool used in the main experiment.

We measure loan officers' stereotypical beliefs about the challenges and capabilities involved in implementing a business using a Likert scale. For constraints, we focus on several key areas: the role of family responsibilities, networking opportunities, personal safety during business dealings with clients and suppliers, credit limitations specifically regarding the ability to invest at least 1 million UGX (about 260 EUR) in the business, and the degree of support from family and friends. The latter encompasses both the opportunity to raise start-up capital and the level of overall moral support.

We also ask loan officers about their beliefs about entrepreneurial mindset and commitment to the business, as proxies for the implementation ability of each entrepreneur.

In the primary section of the survey, loan officers state their beliefs about the implementation challenges and capabilities of entrepreneurs related to the five business proposals. This part includes random manipulation of entrepreneur's gender and team composition. When evaluating teams, loan officers assess each member separately in random order. Subsequently, the officers evaluate statements regarding beliefs about the entrepreneurs' skill set and ability to succeed for each business presented. In the case of entrepreneurial teams, participants also evaluate the perceived quality of the team. We complement this part with evaluations about the determinants of business and loan success independent of team composition. Finally, we elicit a set of gender norms[21] and demographic questions as in the main experiment.

Because we collected the data remotely, we include a set of two attention checks to ensure that participants pay attention.[22] Seventy-one percent of participants passed both attention checks. In our main analysis, we focus on results from these individuals.[23]

Table 6 documents a systematic difference in how loan officers perceive constraints for individual female entrepreneurs. This table focuses on decisions pertaining to individual entrepreneurs and teams of the same gender. The first row of coefficients compares individual female enterprises to the omitted category - individual male entrepreneurs. Compared to their male counterparts, individual female entrepreneurs are perceived to be more burdened with family responsibilities in terms of childcare, to be less likely to attend networking events for small and medium enterprises, and less likely to have received start-up capital from family and friends. Interestingly, and perhaps counter-intuitively, individual female entrepreneurs are seen as more likely to be able to operate safely when running a business and interacting with suppliers, competitors, and customers. However, we do not observe any statistically significant differences in proxies for implementation ability, including an entrepreneurial mindset and individual commitment to the business.

We also observe some negative effects when comparing all-female teams to individual male entrepreneurs, though the effects are overall weaker and sometimes do not reach statistical significance. Same-gender male teams are also perceived as being somewhat more constrained than individual male businesses, but only in the domains of family obligations and family support.

[21] The questions are the same as in the main experiment (see Footnote 14). Reassuringly, the median response is the same as in the main experiment (2.67), even though the mean is shifted towards somewhat less gender biased views among the supplementary study sample (2.52 vs. 2.79).

[22] Specifically, we embedded an attention check in two questions about the pitch decks, asking respondents to select a particular response on a Likert scale, mixed among the main questions of interest.

[23] Tables A14 and A15 show that our results are robust to including observations of participants who did not pass both attention checks.

Table 6: Supplementary Survey: Perceptions about Individual Entrepreneurs & Same-Gender Teams

	No Family Obligations	Networking	Safety	Investment	Capital (Informal)	Moral Support	Commitment	Entrepr. Mindset
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Female Entrepr.	-0.10***	-0.06**	0.05**	-0.00	-0.06**	-0.01	-0.00	-0.01
	(0.03)	(0.03)	(0.02)	(0.03)	(0.03)	(0.03)	(0.02)	(0.02)
Female Team	-0.07**	-0.04	0.06**	-0.02	-0.00	-0.00	-0.00	-0.00
	(0.03)	(0.03)	(0.02)	(0.03)	(0.03)	(0.03)	(0.02)	(0.02)
Male Team	-0.08***	-0.03	0.03	0.00	-0.04	-0.05**	-0.00	-0.00
	(0.03)	(0.03)	(0.02)	(0.03)	(0.03)	(0.03)	(0.02)	(0.02)
Mean Dep. Var.	0.63	0.77	0.81	0.64	0.67	0.73	0.87	0.82
Observations	1082	1082	1082	1082	1082	1082	1082	1082

Notes. OLS Regressions of loan officers' perceptions about the challenges and abilities of individual entrepreneurs. The sample consists of individual businesses and those with same-gender teams, i.e., we exclude mixed-gender businesses from this analysis. The omitted category is *Male Entrepreneurs*, i.e., individual male entrepreneurs. Pitch deck FEs included in all regressions. Standard errors are reported in parentheses and clustered at the individual level. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

However, we do not observe significant differences when we compare the beliefs of loan officers across different team compositions as shown in Table 7. In this table, the omitted category is an all-female team. Relative to this group, male entrepreneurs in all-male teams are expected to receive less moral support from family and friends. Female entrepreneurs in mixed teams are expected to have somewhat fewer family obligations. We do not observe any differences for male entrepreneurs in mixed teams.

Table 7: Supplementary Survey: Perceptions about Teams

	No Family Obligations	Networking	Safety	Investment	Capital (Informal)	Moral Support	Commitment	Entrepr. Mindset
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Male Entrepr., Male team	-0.01	0.00	-0.03	0.02	-0.04	-0.05*	-0.00	-0.00
	(0.03)	(0.03)	(0.02)	(0.03)	(0.03)	(0.03)	(0.02)	(0.02)
Female Entrepr., Mixed team	-0.06**	0.01	-0.00	0.00	-0.00	-0.02	-0.01	0.01
	(0.03)	(0.03)	(0.02)	(0.03)	(0.03)	(0.03)	(0.02)	(0.02)
Male Entrepr., Mixed team	0.03	0.01	0.02	-0.02	0.03	0.05	0.01	-0.00
	(0.04)	(0.03)	(0.02)	(0.03)	(0.03)	(0.03)	(0.02)	(0.02)
Mean Dep. Var.	0.57	0.73	0.87	0.62	0.67	0.73	0.87	0.82
Observations	1046	1046	1046	1046	1046	1046	1046	1046

Notes. OLS Regressions of loan officers' perceptions about the challenges and abilities of individual entrepreneurs. The sample consists of all businesses that were proposed by teams. The omitted category is a *Female Entrepreneur, Female Team*, i.e., a female entrepreneur in an all-female team. Pitch deck FEs included in all regressions. Standard errors are reported in parentheses and clustered at the individual level. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

We now examine which of the eight dimensions of constraints and proxies for implementation ability are predictive of perceived business success. Table A16 regresses the eight measures against loan officers' beliefs about the possession of relevant skills for the business presented (Panel A) and its likelihood of success and profitability within two years (Panel B). The two implementation ability measures - entrepreneurial mindset and commitment - show the strongest correlation with having

the necessary skills to be a successful entrepreneur and with business success. The effect is relatively homogeneous across team compositions for both measures, with the exception of the mixed teams. These are also dimensions in which we do not observe any differences in beliefs by entrepreneur's gender and team composition.

However, the scenario is different for measures of implementation constraints. For possession of relevant skills, we document a positive correlation with the ability to attend networking events for all but mixed teams (Table A16, Panel A), a dimension where loan officers expect individual female businesses to be less likely to attend. For business success, not having family obligations is positively linked with success for individual female entrepreneurs (Panel B, Column 1). Additionally, personal safety in interactions with business clients and suppliers shows a strongly positive correlation with business success for both individual female and male entrepreneurs, with a somewhat stronger correlation for the female entrepreneur (Panel B, Columns 1 and 2). These two types of constraints are also among the set of constraints that loan officers associate with individual female businesses, although the coefficient on personal safety would suggest an increase in the chances of business success. We do not observe any other strong associations for teams of entrepreneurs on the dimension of business success.

Based on the results from the main experiment and the supplementary survey, we conclude that the gender bias in evaluation of female businesses observed in the main experiment does not stem from loan officers' beliefs about differences in entrepreneurs' implementation ability. Beliefs about implementation constraints, especially those related to family obligations, are more likely to affect the investment behavior and selection of most successful business in the main experiment.

5 Conclusion

We analyze whether loan officers evaluate start-up business potential differently for male and female entrepreneurs, both as individual entrepreneurs and in entrepreneurial teams. We use a lab-in-the-field experiment with 451 loan officers in Uganda. Our novel design separates the business founder from the implementer in our two-person entrepreneurial teams, allowing us to locate potential bias in the evaluation of the business idea or in the perceived entrepreneurial capabilities and implementation challenges entrepreneurs face. Evaluation decisions are incentivized based on real-life business performance of the start-ups presented. A supplementary survey further allows us to differentiate between loan officer beliefs about implementation ability and external constraints.

We find a sizable gender bias in business evaluations of individual entrepreneurs, but no such bias for entrepreneurial teams. The bias against individual entrepreneurs is more pronounced

among loan officers who generally hold gender biased attitudes, who are less experienced, and who are female. We do not find gender differences in costly screening effort expended or in the subjective assessment of the quality of the business idea. This supports the idea that there is no particular animus against female-developed business ideas, nor that there is perceived relative lack of information about individual female-led enterprises. Together with the results of the supplementary survey, we attribute the gender bias to differential assessments of external constraints that businesses owned by individual women face. On average, teams are not evaluated or screened differently than individual entrepreneurs. While loan officers display some preference for same-gender teams –independent of the entrepreneurs' gender–, we do not detect a systemic bias against any female entrepreneur on the team, which further speaks against animus as a potential driver of the gender bias for individual entrepreneurs.

It remains puzzling why only individual female businesses face a penalty, and not female entrepreneurial teams. Our supplementary survey evidence is in line with loan officers believing that female entrepreneurs are more constrained by family obligations. Such constraints are more binding for individual entrepreneurs than in teams, where responsibilities can be delegated across team members. Given that loan officers expect both individual female entrepreneurs and female teams to rank similarly in terms of their commitment and ability to run a business, it is likely their perceptions of external constraints rather than individual abilities that drive the result.

Regarding the generalizability of our results, we follow the SANS (selection, attrition, naturalness, and scaling) classification of List (2020). On selection, our study has been conducted among almost half of the entire population of loan officers of a major Ugandan bank for entrepreneurship finance, oversampling branches closer to major urban areas. Due to a loan officer rotation policy, loan officers cannot self-select into the participating branches. Attrition was not an issue. Only eight loan officers who were present at the time of the experimental session did not participate due to other commitments. On naturalness, despite the decisions being framed in the context of a research study, loan officers made incentivized decisions in their regular workplaces about real start-up pitch decks. The pitch decks were selected from a pool of pitches developed for a competition attended by Ugandan venture capitalists in which the stakes were high. For the purposes of the study, we manipulated only the names on the pitch decks to signal gender. Finally, we also comment on the potential for scaling our results beyond the sample studied. While Uganda is characterized by rather low financial development (ranking 164 of 183 for the Financial Development Indicator (IMF, 2021)) and gender equality (ranking 131 of 170 on the UN Gender Inequality Index (UNDP, 2022)), our results on gender bias, particular that they are driven by loan officers with stronger gender biases, confirm the results by Brock and De Haas (2023) for Turkey, a

country that scores much higher on financial development (ranking 38 of 183) and gender equality (ranking 65 of 170). This suggests that our results are indeed relevant for countries even beyond those that are similar to Uganda in terms of financial development and gender equality.

Our results have two implications. First, the observed bias against individual female entrepreneurs can be attributed to loan officers' beliefs that women face more pronounced implementation constraints. Understanding whether such beliefs are correct or whether and how they are biased would be critical for designing interventions aimed at reducing the bias (Bohren et al., 2023). In the first case, more tailored policies to reduce structural disadvantages facing individual female entrepreneurs would be required. In the second case, loan officers should be provided more accurate information regarding individual female entrepreneurs' performance to correct their beliefs. This seems particularly important, because biases based on incorrect beliefs reinforce existing gender gaps, impeding possible corrections of wrong beliefs without an external stimulus.

Second, in contrast to the results for individual entrepreneurs, the results documenting a lack of a bias for entrepreneurial teams, and the equality in average evaluations of teams and individual entrepreneurs introduces more nuance into the discussion of the roles of gender in access to finance and firm growth. Because start-ups with teams of entrepreneurs are more profitable than those of individual entrepreneurs in high-income countries (Åstebro & Serrano, 2015) and start-up accelerators and incubators promote team formation, access to finance for team enterprises may not be disadvantageous to women. This is true as long as entrepreneurs can credibly signal the team composition of their business or apply for funding jointly as a team. Moreover, policies aimed at team formation for start-up enterprises may have an additional benefit of equalizing access to finance. In a dynamic setting, the penalty in evaluations of individual female enterprises may also contribute to under-representation of female businesses among larger firms, due to difficulties at the start of their potential growth trajectory. What remains to be understood is why women face a penalty when running a business individually and not in a team of female entrepreneurs and why Ugandan loan officers do not evaluate teams in general better than individual entrepreneurs.

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A Appendix - For Online Publication

A.1 Tables

Table A1: Founder and Implementer Names

Male	**Female**
Benjamin	Alinda
David	Carolin
Derrick	Dorothy
Duncan	Elisabeth
Kelvin	Esther
Martin	Juliana
Nicholus	Olivia
Ivan	Patience
Joel	Rebecca
Richard	Vanessa

Notes. Names used to signal the gender of founder and implementer.

Table A2: Balance Test

	Male Entrepreneur		Female Entrepreneur			
	Mean	SD	Mean	SD	Difference	P-Value
	(1)	(2)	(3)	(4)	(5)	(6)
Age	34.02	5.04	34.17	5.24	-0.15	0.75
Male	0.57	0.50	0.54	0.50	0.03	0.54
Experience	6.84	4.06	6.73	4.35	0.12	0.77

Notes. Comparison of loan officer characteristics who saw an individual entrepreneur as male or as female. Columns (1)-(4) show the mean and the standard deviation of the characteristics across both samples, Column (5) reports the difference between the means, Column (6) shows the p-value of a two-sample t-test.

Table A3: Investment and Best Business Decision [Individual Entrepreneurs]: Robustness Check with Individual Controls

Panel A: Investment		Gender bias		LO gender		Experience	
		Weak	Strong	Female	Male	Low	High
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Female Entrepreneur	-232.98**	-125.77	-384.55**	-284.84	-219.13	-270.68	-214.39
	(118.50)	(171.93)	(169.40)	(179.38)	(159.43)	(184.55)	(159.83)
Age	-7.57	1.63	-14.75	-40.78	13.12	27.47	-50.00**
	(17.12)	(22.47)	(26.62)	(25.64)	(21.52)	(22.92)	(23.11)
Experience	31.09	13.50	55.64*	66.88**	10.43	-20.91	88.01***
	(19.64)	(26.29)	(30.00)	(30.04)	(24.18)	(57.79)	(28.44)
Male	268.88**	140.92	292.43*			254.86	273.40*
	(120.70)	(179.65)	(162.14)			(178.97)	(164.08)
Mean Dep. Var.	3,490.74	3,342.11	3,656.86	3,333.33	3,609.76	3,442.71	3,529.17
Observations	451	234	217	201	250	199	252
Panel B: Best Business							
Female Entrepreneur	-0.07*	-0.04	-0.10*	-0.11*	-0.04	-0.14**	-0.04
	(0.04)	(0.05)	(0.05)	(0.06)	(0.05)	(0.06)	(0.05)
Age	0.00	0.01	-0.00	-0.01	0.01	0.00	-0.00
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Experience	-0.01**	-0.02*	-0.01	0.00	-0.03***	-0.02	-0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)
Male	0.07*	0.01	0.11*			0.12*	0.05
	(0.04)	(0.06)	(0.05)			(0.06)	(0.05)
Mean Dep. Var.	0.26	0.25	0.27	0.24	0.28	0.33	0.21
Observations	451	234	217	201	250	199	252

Notes. OLS Regressions of the dependent variable *Investment* (Panel A) or *Best Business* (Panel B) on the gender of the individual entrepreneur who founded and implemented the business. The sample consists of individual business pitches only, i.e. one pitch deck per loan officer. Panel A reports the incentivized decision of how much to invest in the pitch deck business from 0-5,000 UGX. Panel B reports the incentivized decision to select the best business idea; it is a probability. Column (1) reports the average effect, and Columns (2)-(7) split the observations according to different relevant observable characteristics. (2)-(3) split by gender bias following International Social Survey Programme gender bias metrics (see footnote 14). The sample is split at the median. (4)-(5) are split according to the self-reported gender of the participant, and (6)-(7) are split at the median years of experience. *Mean Dep. Var* indicates the mean of the dependent variable of the reference group. Standard errors are heteroskedasticity-robust and reported in parentheses. The table includes pitch deck FE in both Panels. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A4: Main Results for Accurate Participants Only [Individual Entrepreneurs]

	Investment	Best Business	Request Info	# Info	P[failure]	P[small profits]	P[large profits]
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Female Entrepreneur	-219.40*	-0.06	0.06	0.02	2.98	-2.95	-0.04
	(123.53)	(0.04)	(0.05)	(0.14)	(2.32)	(2.28)	(2.69)
Mean Dep. Var.	3,460.94	0.25	0.36	0.69	23.63	41.25	35.12
Observations	410	410	410	410	410	410	410

Notes. OLS Regressions. The sample of accurate participants excludes the choices of the ten percent of individual loan officers who clicked most on the survey page when answering comprehension questions. The dependent variable is the gender of the individual entrepreneur who founded and implemented the business. *Mean Dep. Var* indicates the mean of the dependent variable of the reference group. The table includes pitch deck FE except for Columns (3)-(4). Standard errors are heteroskedasticity-robust and reported in parentheses. *** p <0.01, ** p <0.05, * p <0.1.

Table A5: Beliefs about Business Success [Individual Entrepreneurs]

	P[failure]	P[small profits]	P[large profits]
	(1)	(2)	(3)
Female Entrepreneur	4.08*	-2.86	-1.22
	(2.19)	(2.21)	(2.57)
Mean Dep. Var.	22.47	41.80	35.73
Observations	451	451	451

Notes. OLS Regressions of the probability of the realization of three different scenarios about the business success on the gender of the individual entrepreneur who founded and implemented the business. The sample consists of individual business pitches only, i.e. one pitch deck per loan officer. 100 points could be allocated among the three different scenarios. The question was phrased as follows: *What is the chance that this business idea will 1) fail within the first year, 2) survive the first year, but only make small profits, and 3) survive the first year and make large profits. Mean Dep. Var* indicates the mean of the dependent variable of the reference group. The table includes pitch deck FE. Standard errors are heteroskedasticity-robust and reported in parentheses. *** p <0.01, ** p <0.05, * p <0.1.

Table A6: Idea Quality [Individual Entrepreneurs]

	Idea Quality (0-100)				
	Round/Deck 1	Round/Deck 2	Round/Deck 3	Round/Deck 4	Round/Deck 5
	(1)	(2)	(3)	(4)	(5)
Female Founder	0.64	-1.79	-4.94	4.56	-6.16
	(4.08)	(5.17)	(4.77)	(4.02)	(3.94)
Mean Dep. Var.	69.12	63.30	71.05	74.05	75.85
Observations	86	81	92	85	107

Notes. OLS regressions of the perceived quality of the business ideas on the gender of the individual entrepreneur who founded and implemented the business. The sample consists of individual business pitches only. The index is based on two questions: *1) Does this business idea meet a need or solve a problem in Uganda?* and *2) Is there a market for this business idea in Uganda?* Participants rated their agreement on a scale ranging from 0 (*completely disagree*) to 100 (*completely agree*). *Mean Dep. Var* indicates the mean of the dependent variable of the reference group. Standard errors are heteroskedasticity-robust and reported in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A7: Investment and Best Business: Robustness Check with Alternative Gender Bias Measure [Individual Entrepreneurs]

Panel A: Individuals	Investment		Best Business	
	Weak Bias	Strong Bias	Weak Bias	Strong Bias
	(1)	(2)	(3)	(4)
Female Entrepreneur	-111.78	-386.84**	-0.05	-0.10*
	(169.41)	(169.07)	(0.05)	(0.05)
Mean Dep. Var.	3,305.19	3,443.18	0.25	0.21
Observations	231	220	231	220
Panel B: Teams				
Female Founder	-133.02	145.95	-0.04	0.01
	(118.14)	(125.19)	(0.05)	(0.05)
Female Implementer	-141.99	23.03	-0.04	-0.02
	(126.86)	(107.47)	(0.05)	(0.05)
Female Founder&Implementer	142.53	-60.65	0.14*	0.06
	(178.27)	(160.70)	(0.07)	(0.08)
Mean Dep. Var.	3,238.64	3,398.30	0.19	0.19
Observations	924	880	924	880

Notes. OLS Regressions of the dependent variable *Investment* or *Best Business* on the gender of the individual entrepreneur who founded and implemented the business (Panel A) or on the gender of the founder and the implementer in teams (Panel B). The sample consists of individual business pitches only. *Investment* is the incentivized decision of how much to invest in the pitch deck business from 0-5,000 UGX. *Best Business* is the incentivized decision on which is the best business; it is a probability. The table splits the sample by gender bias following International Social Survey Programme gender bias metrics (see footnote 14). The adjusted gender bias measure in this table only uses the following two questions: *A man's job is to earn money; a woman's job is to look after the home and family* and *a job is alright, but what most women really want is home and children.* The sample is split at the median. *Mean Dep. Var* indicates the mean of the dependent variable of the reference group. Standard errors are heteroskedasticity-robust in Panel A, clustered at the individual level in Panel B, and reported in parentheses. The table includes pitch deck FE in both Panels, Panel B additionally includes individual FE. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A8: Correlations of Business Evaluation Measures [Individual Entrepreneurs]

	Investment (1)	Best Business (2)	Idea Quality (3)	P[failure] (4)	P[large profits] (5)
Investment	1.00				
Best Business	0.26***	1.00			
Idea Quality	0.52***	0.27***	1.00		
P[failure]	−0.38 ***	−0.16 ***	−0.46 ***	1.00	
P[large profits]	0.32***	0.20***	0.38***	−0.57 ***	1.00

Notes. Pearson correlation coefficients *** p <0.01, ** p <0.05, * p <0.1.

Table A9: Investment Decision - Pre-Analysis Plan [Teams of Entrepreneurs]

Panel A: Investment		Gender bias		LO gender		Experience	
	(1)	Weak (2)	Strong (3)	Female (4)	Male (5)	Low (6)	High (7)
Female Founder	27.60	-109.48	174.52*	19.89	30.41	-16.01	67.55
	(65.54)	(94.83)	(90.36)	(91.32)	(92.29)	(96.56)	(89.15)
Female Implementer	-40.00	-30.97	-53.75	-88.76	-6.71	-68.52	-9.83
	(56.55)	(80.97)	(78.94)	(86.33)	(74.21)	(80.70)	(79.12)
Mean Dep. Var.	3,352.21	3,395.60	3,308.33	3,353.50	3,351.22	3,303.03	3,393.40
F-Statistic	0.02	1.05	0.92	0.28	0.03	0.43	0.20
P-Value	0.89	0.31	0.34	0.60	0.85	0.51	0.66
Observations	1804	936	868	804	1000	796	1008
Panel B: Best Business							
Female Founder	0.03	0.00	0.06**	0.04	0.03	0.04	0.03
	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Female Implementer	0.02	0.02	0.01	-0.00	0.03	-0.02	0.05*
	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Mean Dep. Var.	0.21	0.23	0.18	0.27	0.16	0.21	0.21
F-Statistic	2.30	0.24	2.44	0.37	2.24	0.16	2.84
P-Value	0.13	0.62	0.12	0.54	0.14	0.69	0.09
Observations	1804	936	868	804	1000	796	1008

Notes. OLS Regressions of the dependent variable *Investment* (Panel A) or *Best Business* (Panel B) on the gender of the founder and the implementer in teams. The sample consists of entrepreneurial team pitches only, i.e. four pitch decks per loan officer. Panel A reports the incentivized decision of how much to invest in the pitch deck business from 0-5,000 UGX. Panel B reports the incentivized decision to select the best business idea; it is a probability. Column (1) reports the average effect, and Columns (2)-(7) split the observations according to different relevant observable characteristics. (2)-(3) split by gender bias following International Social Survey Programme gender bias metrics (see footnote 14). The sample is split at the median. (4)-(5) are split according to the self-reported gender of the respondent, and (6)-(7) are split at the median years of experience. *Mean Dep. Var* indicates the mean of the dependent variable of the reference group. Standard errors are clustered at the individual level and reported in parentheses. The table includes pitch deck and individual FE in Panel A and pitch deck FE in Panel B. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A10: Correlations of Business Evaluation Measures [Teams of Entrepreneurs]

	Investment (1)	Best Business (2)	Idea Quality (3)	P[failure] (4)	P[large profits] (5)
Investment	1.00				
Best Business	0.18***	1.00			
Idea Quality	0.51***	0.21***	1.00		
P[failure]	−0.32 ***	−0.17 ***	−0.42 ***	1.00	
P[large profits]	0.33***	0.22***	0.37***	−0.61 ***	1.00

Notes. Pearson correlation coefficients *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Table A11: Main Results for Accurate Participants Only [Teams of Entrepreneurs]

	Investment (1)	Best Business (2)	Request Info (3)	# Info (4)	P[failure] (5)	P[small profits] (6)	P[large profits] (7)
Female Founder	1.62	-0.02	0.11	0.27	-0.01	1.87	-1.86
	(90.72)	(0.03)	(0.07)	(0.24)	(1.64)	(1.58)	(1.81)
Female Implementer	-69.31	-0.02	0.03	-0.13	-1.30	4.24***	-2.94
	(87.92)	(0.03)	(0.07)	(0.19)	(1.53)	(1.57)	(1.88)
Female Founder&Implementer	53.40	0.08*	-0.03	0.06	-0.88	-4.14*	5.02*
	(127.08)	(0.04)	(0.11)	(0.32)	(2.21)	(2.20)	(2.80)
Mean Dep. Var.	3,320.55	0.21	0.40	0.75	26.07	37.04	36.89
F-Statistic	0.02	1.38	1.99	0.65	1.62	1.20	0.01
P-Value	0.89	0.24	0.16	0.42	0.20	0.27	0.92
Observations	1640	1640	332	332	1640	1640	1640

Notes. OLS Regressions. The sample of attentive participants excludes the choices of ten percent of individuals who clicked most on the survey page when answering comprehension questions. The dependent variable is the gender of the founder and the implementer in teams. *Mean Dep. Var* indicates the mean of the dependent variable of the reference group. The table includes pitch deck FE, individual FE and standard errors clustered at the individual level in Columns (1) & (5)-(7). Column (2) includes pitch deck FE and standard errors clustered at the individual level. Columns (2) & (3) do not include any FE, but heteroskedasticity-robust standard errors. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Table A12: Investment Decision by Round (Pitch Deck) [Teams of Entrepreneurs]

	Investment into Business (0-5,000 UGX)				
	Round/Deck 1	Round/Deck 2	Round/Deck 3	Round/Deck 4	Round/Deck 5
	(1)	(2)	(3)	(4)	(5)
Female Founder	-209.59	-181.78	16.52	141.41	266.79
	(188.48)	(245.50)	(182.62)	(194.39)	(189.73)
Female Implementer	-257.66	-74.06	90.15	-116.34	64.20
	(177.09)	(230.17)	(181.05)	(191.18)	(184.82)
Female Founder&Implementer	228.80	3.54	62.38	141.15	-320.35
	(274.56)	(307.05)	(269.47)	(278.24)	(286.52)
Mean Dep. Var.	3,423.08	3,192.31	3,308.22	3,413.04	3,358.21
Indiv. FE	No	No	No	No	No
Indiv. Controls	No	No	No	Yes	No
Round FE	No	No	No	No	No
Observations	365	370	359	366	344

Notes. OLS Regressions of the five different investment decisions on the gender of the founder and the implementer in teams. The sample consists of entrepreneurial team pitches only, i.e. four pitch decks per loan officer. *Mean Dep. Var* indicates the mean of the dependent variable of the reference group. Standard errors are heteroskedasticity-robust and reported in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Table A13: Beliefs about Business Success [Teams of Entrepreneurs]

	P[failure]	P[small profits]	P[large profits]
	(1)	(2)	(3)
Female Founder	0.24	0.96	-1.20
	(1.39)	(1.38)	(1.63)
Female Implementer	-0.40	2.08	-1.69
	(1.34)	(1.41)	(1.63)
Female Founder&Implementer	-1.57	-1.56	3.13
	(2.00)	(2.00)	(2.47)
Mean Dep. Var.	25.16	38.51	36.33
Observations	1804	1804	1804

Notes. OLS Regressions of the probability of the realization of three different scenarios about the business success on the gender of the founder and the implementer in teams. The sample consists of entrepreneurial team pitches only, i.e. four pitch decks per loan officer. 100 points could be allocated among the three different scenarios. The question was phrased as follows: *What is the chance that this business idea will 1) fail within the first year, 2) survive the first year, but only make small profits, and 3) survive the first year and make large profits. Mean Dep. Var* indicates the mean of the dependent variable of the reference group. Standard errors clustered at the individual level. The table includes pitch deck FE. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Table A14: Supplementary Survey: Perceptions about Individuals & Same-Gender Teams [Full Sample]

	No Family Obligations	Networking	Safety	Investment	Capital (Informal)	Moral Support	Commitment	Entrepr. Mindset
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Female Entrepr.	-0.07***	-0.04	0.04*	0.00	-0.05**	0.00	0.01	0.02
	(0.03)	(0.02)	(0.02)	(0.03)	(0.02)	(0.02)	(0.02)	(0.02)
Female Team	-0.03	-0.04	0.03*	-0.01	-0.02	0.01	-0.01	-0.00
	(0.03)	(0.02)	(0.02)	(0.03)	(0.02)	(0.02)	(0.02)	(0.02)
Male Team	-0.05*	-0.02	0.02	0.01	-0.03	-0.02	0.01	0.02
	(0.03)	(0.03)	(0.02)	(0.03)	(0.02)	(0.02)	(0.02)	(0.02)
Mean Dep. Var.	0.61	0.75	0.81	0.65	0.67	0.71	0.85	0.80
Observations	1524	1524	1524	1524	1524	1524	1524	1524

Notes. OLS Regressions of loan officers' perceptions about the challenges and abilities of entrepreneurs. The sample consists of individual businesses and those with same-gender teams, i.e., we exclude mixed-gender businesses from this analysis. The omitted category is *Male Entrepreneurs*, i.e., individual male entrepreneurs. Standard errors are reported in parentheses and are clustered at the individual level. The table includes pitch deck FE. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A15: Supplementary Survey: Perceptions about Teams [Full Sample]

	No Family Obligations	Networking	Safety	Investment	Capital (Informal)	Moral Support	Commitment	Entrepr. Mindset
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Male Entrepr., Male team	-0.02	0.01	-0.01	0.03	-0.02	-0.03	0.02	0.02
	(0.03)	(0.03)	(0.02)	(0.03)	(0.02)	(0.02)	(0.02)	(0.02)
Female Entrepr., Mixed team	-0.05*	0.02	0.00	0.01	-0.00	-0.01	-0.00	0.02
	(0.03)	(0.02)	(0.02)	(0.03)	(0.02)	(0.02)	(0.02)	(0.02)
Male Entrepr., Mixed team	0.03	-0.00	-0.00	-0.03	0.01	0.03	-0.02	-0.03
	(0.03)	(0.03)	(0.02)	(0.03)	(0.02)	(0.02)	(0.02)	(0.02)
Mean Dep. Var.	0.58	0.72	0.84	0.63	0.66	0.73	0.85	0.80
Observations	1478	1478	1478	1478	1478	1478	1478	1478

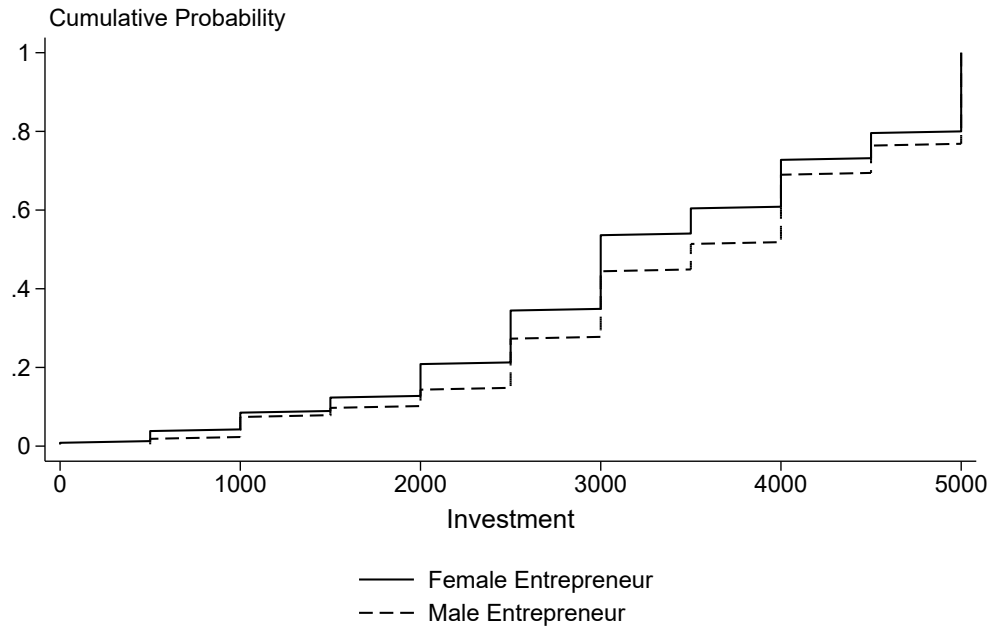
Notes. OLS Regressions of loan officers' perceptions about the challenges and abilities of entrepreneurs. The sample consists of all businesses that were proposed by teams. The omitted category is a *Female Entrepreneur, Female Team*, i.e., a female in a same-gender team. Standard errors are reported in parentheses and are clustered at the individual level. The table includes pitch deck FE. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A16: Supplementary Survey: Predicting Pitch Level Results

Panel A: Skills	Individual		Teams		
	Female (1)	Male (2)	Female (3)	Male (4)	Mixed
No Family Obligations	0.07	0.01	-0.00	-0.05	0.09
	(0.07)	(0.07)	(0.05)	(0.05)	(0.08)
Networking	0.26***	0.20**	0.22***	0.30***	0.12
	(0.09)	(0.08)	(0.07)	(0.07)	(0.08)
Safety	0.03	0.10	0.07	0.06	0.04
	(0.12)	(0.08)	(0.11)	(0.09)	(0.10)
Investment	0.04	0.01	-0.00	0.01	0.08
	(0.07)	(0.06)	(0.08)	(0.06)	(0.07)
Capital (Informal)	-0.02	-0.02	0.11	0.04	0.01
	(0.07)	(0.08)	(0.10)	(0.07)	(0.09)
Moral Support	-0.03	0.05	0.04	0.17**	0.13
	(0.08)	(0.10)	(0.09)	(0.08)	(0.11)
Commitment	0.35**	0.20*	0.13	0.12*	-0.01
	(0.13)	(0.12)	(0.10)	(0.07)	(0.11)
Entrepreneurial Mindset	0.25**	0.39***	0.35***	0.30***	0.23**
	(0.12)	(0.15)	(0.10)	(0.09)	(0.11)
Mean Dep. Var.	0.74	0.72	0.75	0.75	0.75
Observations	192	180	344	366	336
Panel B: Success					
No Family Obligations	0.11*	0.03	-0.02	0.06	0.09
	(0.06)	(0.07)	(0.05)	(0.05)	(0.06)
Networking	0.07	0.13	0.06	0.07	0.01
	(0.08)	(0.08)	(0.06)	(0.06)	(0.06)
Safety	0.23**	0.11*	0.08	0.14	0.07
	(0.10)	(0.06)	(0.09)	(0.09)	(0.10)
Investment	0.05	0.05	-0.05	-0.00	0.06
	(0.05)	(0.05)	(0.06)	(0.06)	(0.07)
Capital (Informal)	0.04	-0.00	0.10	0.04	0.01
	(0.07)	(0.07)	(0.08)	(0.06)	(0.08)
Moral Support	-0.10	-0.01	-0.03	0.08	0.18*
	(0.08)	(0.10)	(0.11)	(0.07)	(0.10)
Commitment	0.23**	0.24*	0.19*	0.16*	-0.01
	(0.12)	(0.13)	(0.11)	(0.09)	(0.09)
Entrepreneurial Mindset	0.21**	0.16*	0.22***	0.33***	0.05
	(0.09)	(0.10)	(0.08)	(0.11)	(0.09)
Mean Dep. Var.	0.75	0.75	0.73	0.74	0.73
Observations	192	180	344	366	336

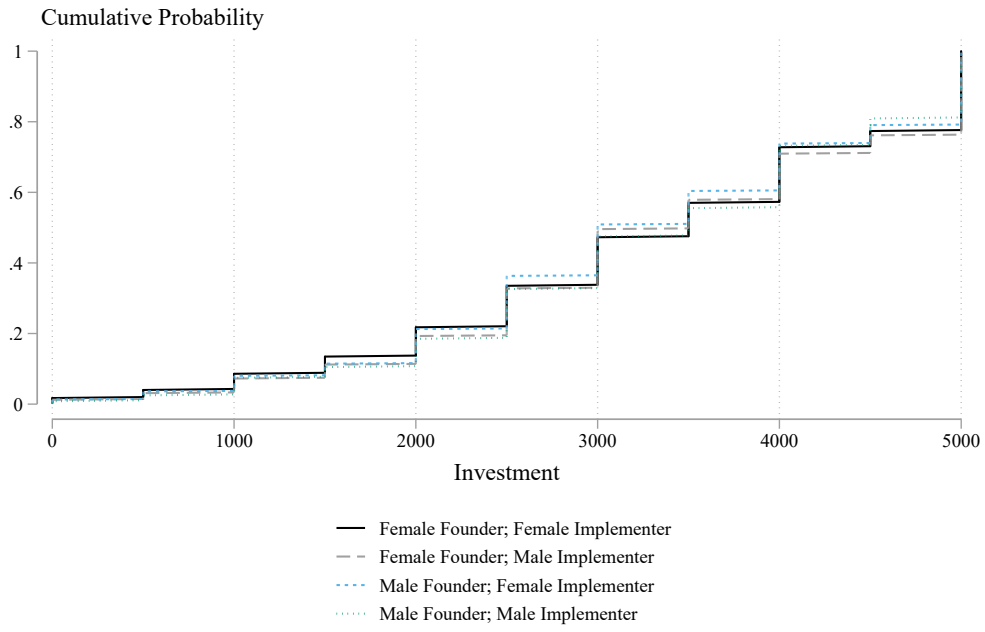
Notes. OLS Regressions of the dependent variable *Skills* (Panel A) or *Success* (Panel B) on the challenges and capabilities involved in implementing a business. Panel A reports the loan officer's beliefs about how challenges and capabilities relate to prospective entrepreneurs having skills relevant to the business presented. Panel B reports how the challenges and capabilities relate to the loan officer's beliefs about the likelihood of success and profitability of the business in two years. Standard errors are reported in parentheses and are clustered at the individual level. The table includes pitch deck FE. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

A.2 Figures



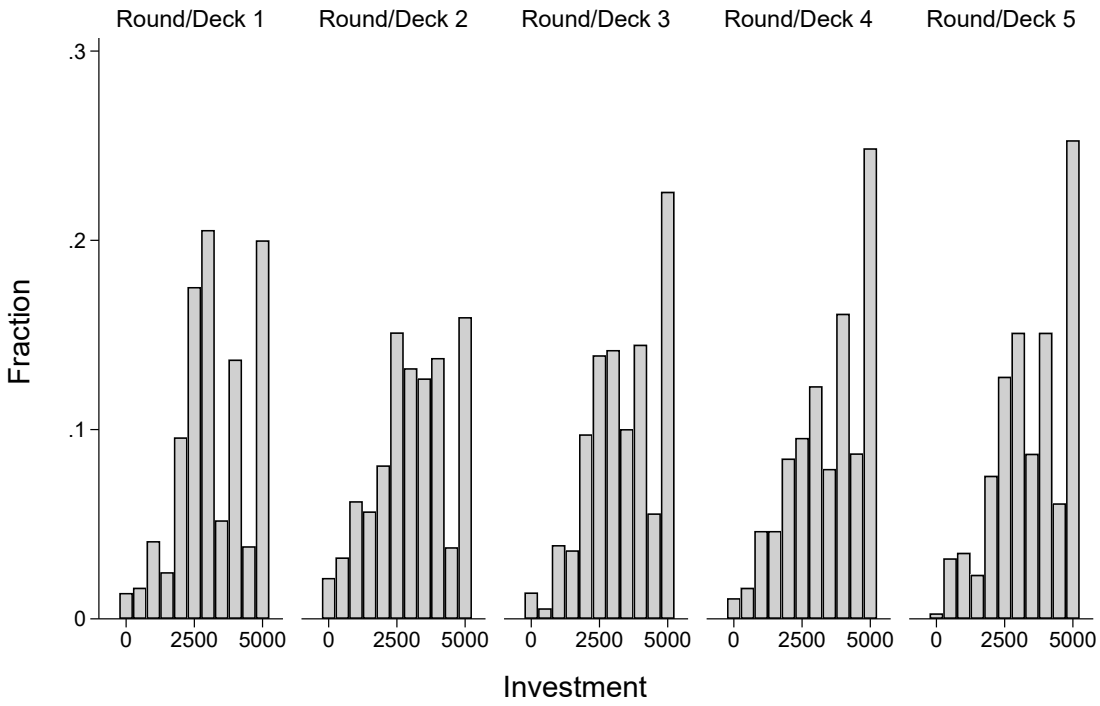
Notes. This figure shows the cumulative distribution functions of the amounts invested into businesses of individual female or male entrepreneurs.

Figure A1: Distribution Investment [Individual Entrepreneurs]



Notes. This figure shows the cumulative distribution functions of the amounts invested into businesses of entrepreneurial teams with varying gender of the founder and implementer.

Figure A2: Distribution Investment [Teams of Entrepreneurs]



Notes. This figure shows individual histograms for the amounts invested into each of the pitch decks for the sample of entrepreneurial teams.

Figure A3: Investment across Rounds/Pitch Decks [Teams of Entrepreneurs]

A.3 Introduction to the Study and Informed Consent

In this section, we provide an overview of the introductory session that facilitators delivered to participants prior to the actual study. After an introduction from the branch manager, the facilitator outlined the study's objectives: to evaluate five start-up businesses and to express their own opinions about the prospective success of the proposed start-up. We did not disclose our interest in gender differences in these evaluations.

We familiarized the participants with the questionnaire's structure using flip charts. We visually illustrated the survey procedures and the structure of incentives as outlined in detail in Section A.4. We used enhanced graphical illustrations to explain the investment decisions and the resulting payouts depending on real-life business survival. Further, we provided technical instructions, such as how to operate a slider. All clarifying questions were answered.



Investment Graphical Depiction

All participants gave their informed consent. Participants were informed that their participation is voluntary, and they have the right to withdraw at any point without facing any negative consequences.

Following the introduction, participants proceeded to their workstations to take the survey: see Section A.4. The facilitators were present throughout the experimental session to resolve any comprehension questions or technical issues during the study.

A.4 Survey

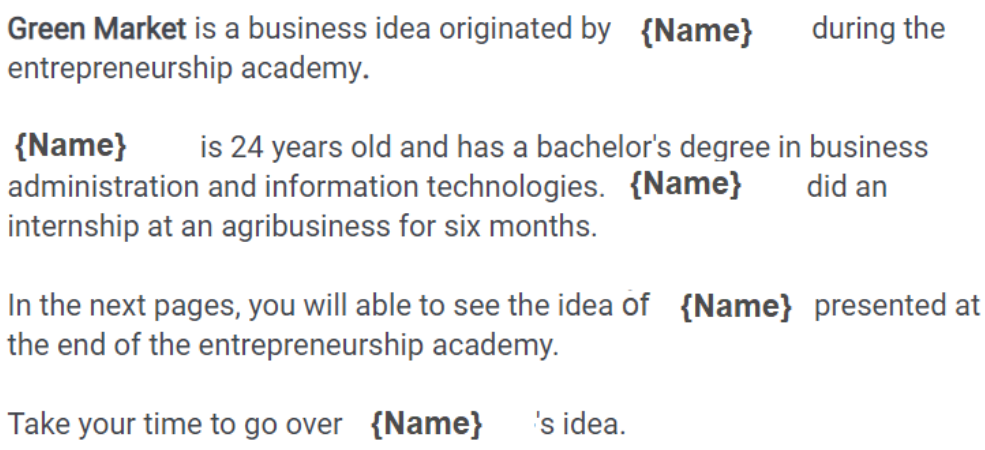
In this subsection, we present a summary of the survey's structure. The survey was administered using Qualtrics software.[24]

Instructions and Comprehension Check
At their workstation, participants need to answer two comprehension questions to evaluate their understanding of the incentivized investment questions before they can proceed with the survey. The comprehension questions are as follows:

1. *Imagine that you invest 2,500 UGX to the business and keep 2,500 UGX. The business reported that it still exists and makes profits. How much do you have in total?*
2. *Imagine that you invest 4,000 UGX to the business and keep 1,000 UGX. The business reported that it does not exist anymore. How much will you have in total?*

These questions are crucial to ensure that participants have understood the investment decisions that were presented to them during the introduction of the study and that they are about to make.

Pitch Deck Presentation
Each pitch deck presents first the name of the business idea and the identity of the **founder** associated with it. According to the experimental design, the name of the founder is randomly varied, while all other information remains constant for each loan officer.



Founder Description

After the description of the founder, the pitch deck detailing the business idea is presented. Below is the first business idea, *Green Market*.

[24] https://www.qualtrics.com/

Green Market

Promoting agriculture through bringing Market closer to farmers



1

Problem

Inadequate ready market for agricultural produce, inputs



2

Solution

A platform where farmers connect directly with the buyers





3

Unique Value Proposition

- Affordability
- Farmers can advertise products they are intending to sell
- Buyers are given a chance to demand
- Access anytime of your convenience
- User friendly



4

Revenue Model

- Buyers and sellers who connect pay a monthly subscription fee of 5,000 UGX each
- Farmers pay for advertising their product on the platform. Advertising fee is 10,000 UGX for 30 days





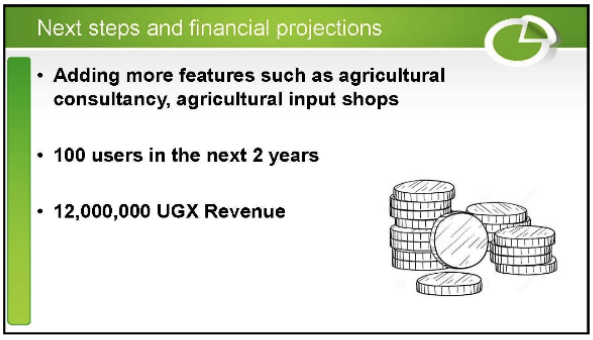
5

Status quo and Accomplishment

- We are still at our initial stage and so far reached 3 customers
- We look forward to reach 100 customers in near future



6



7



8

After reviewing the business idea, participants are asked to evaluate the idea quality subjectively. These measures are not incentivized: *Please rate your level of agreement from 0-100 with the following statements:*

1. *This business idea meets a need or solves a problem in Uganda.*
2. *There is a market for this business idea in Uganda.*

Subsequently, the **implementer** of the idea is presented. For the business idea *Green Market*, the implementer's information reads as follows:

The candidate to implement this idea is {Name}. {Name} is 25 years old and holds a degree in business administration and information technologies. {Name} also participated in entrepreneurship academies and completed a semester-long internship at a farming enterprise.
Participants proceed to the questions related to the pitch deck after reviewing the implementer information.

Manipulation and Attention Check
Before proceeding to the main survey questions, we check that participants know the gender of the founder and the implementer. The question includes three potential answers, with only one of them being correct. This verifies that participants picked up on our gender manipulation.

Before we do that, we just want to check what you remember about the description of Green Market. Which statement is true?



Business idea originated by: **{Name}**
Implemented by: **{Name}**

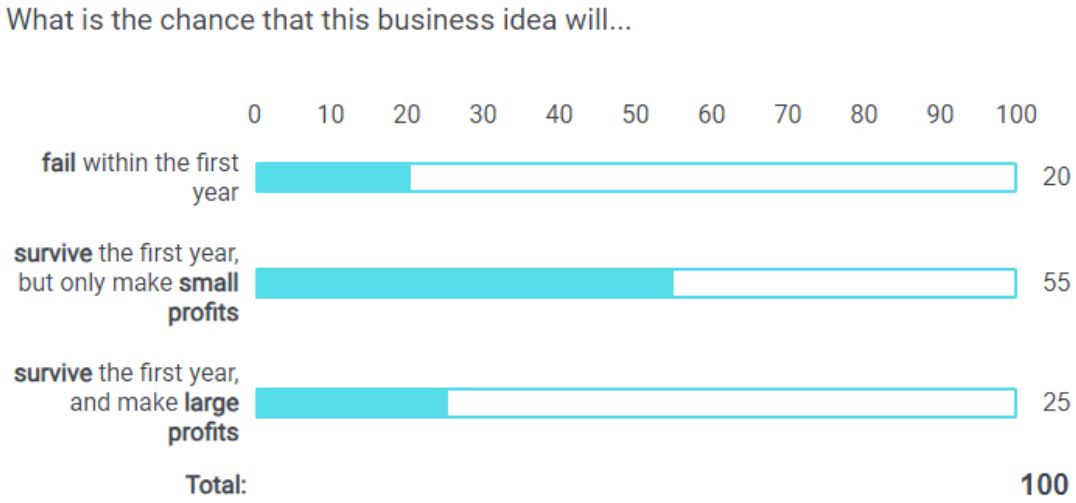
{Name} came up with the idea of Green Market during an entrepreneurship academy.

Green Market was not implemented by {Name}

Green market is a company that focuses on production of renewable electricity.

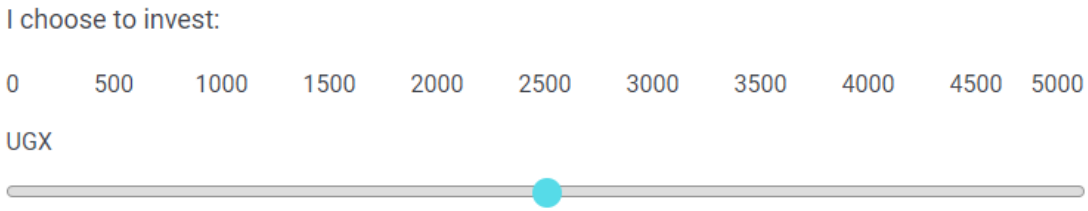
Probabilistic Beliefs about Business Success

The first set of questions asks participants to estimate the likelihood of three different types of business outcomes.



Investment

In this question, participants choose the amount they want to invest in the business, ranging from 0 to 5,000 UGX. They see a slider on the screen to facilitate their decision-making process.



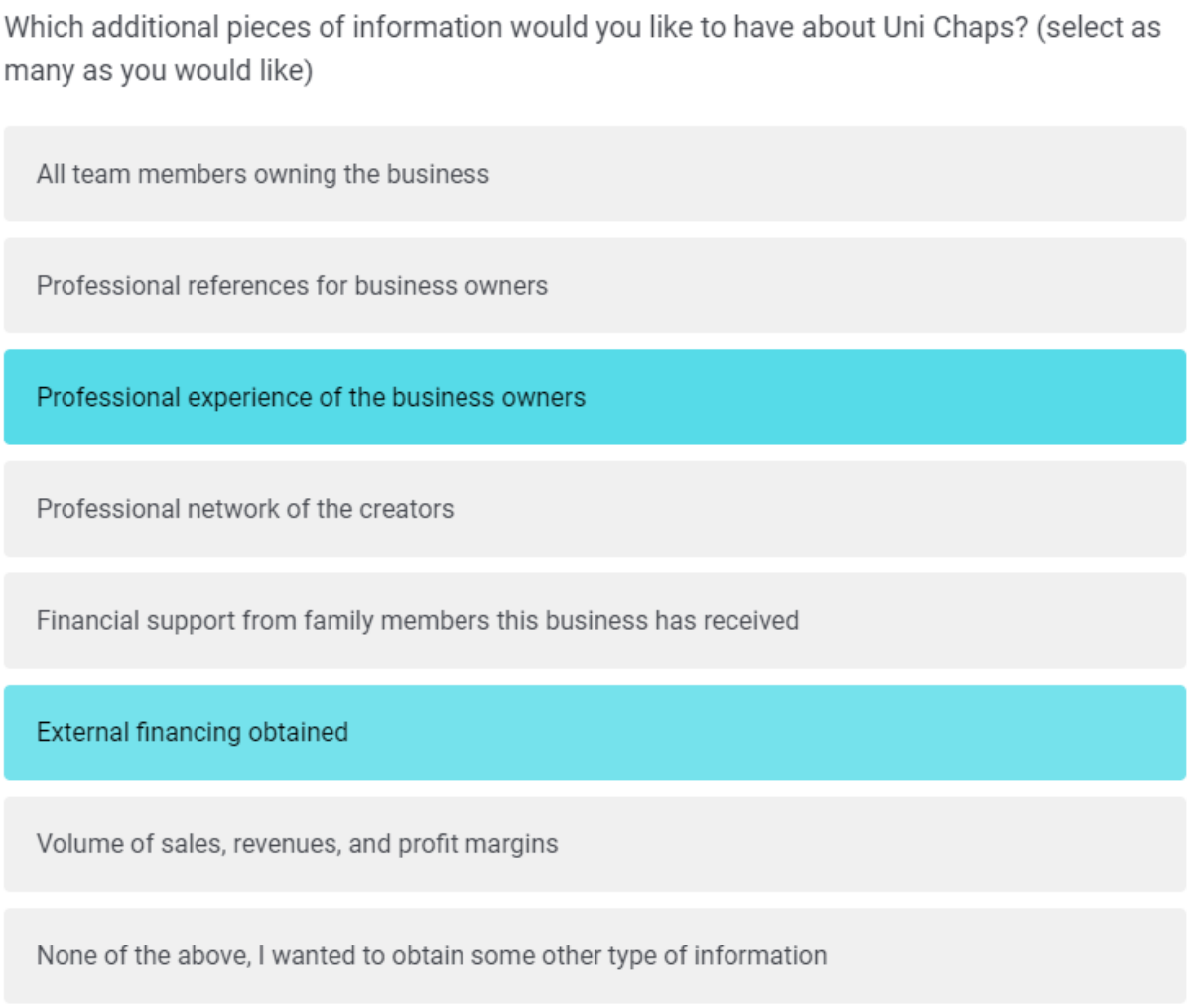
Sequence of Pitch Decks
In total, participants see five pitch decks. This means that the sequence from "Pitch Deck Presentation" to this point is repeated five times, once for each pitch deck.

Best Performing Business
In this question, participants select the business that they think is the most profitable of the five:
Which business do you think was generating the highest profits when we last contacted them? If you guess correctly, you will earn an additional 5,000 UGX bonus. However, if your guess is incorrect, you will not receive any bonus.
Participants are incentivized to make an accurate prediction, as a correct choice will result in a bonus reward.

Information Request
Participants can revise the amount they initially decided to invest in the business that was selected to be payoff-relevant. For this, they can request additional information. Participants are informed about this in the following way:
Uni Chaps was chosen as the business for which the investment decision will determine the potential bonus. You previously decided to invest {amount} UGX in this business. We would like to offer you the chance to revise your investment. To make an informed decision, you have the option to obtain additional information about Uni Chaps. However, it is essential to note that acquiring and verifying this information incurs a cost. Just as in your job, gathering and assessing information about a borrower's business entails costs, such as the time spent on this task.

1. *Yes, I want to check which additional information is available.*
2. *No, I will revise my investment decision without additional information.*

If the participant selects 'Yes', the available information and its associated cost are explained as follows:
Each piece of additional information, if available, costs 200 UGX. If you choose to access a particular piece of information, we will deduct 200 UGX from your final payoff. Conversely, if the requested information is not available, there will be no charge, and your payoff will not be affected.
Participants are fully informed about the cost implications associated with acquiring additional information, enabling them to make an informed decision on whether to proceed to obtain the information or not.



If the participant selects 'No', they have the opportunity to revise their investment without seeing which pieces of information may be available.

Gender Norms

Participants are asked to indicate their level of agreement with the following statements using a 5-point Likert scale:

(a) *A man's job is to earn money; a woman's job is to look after the home and family.*
(b) *Family life suffers when the woman has a full-time job.*
(c) *A job is all right, but what most women really want is a home and children.*

Demographics

The survey concludes with three demographic questions:

1. *How old are you?*
2. *What is your gender? (Male / Female / Other)*
3. *How long have you been a loan officer?*

A.5 Supplementary Survey: Wording and Informed Consent

Supplementary Survey data was collected in November 2023 using Qualtrics.

Introduction and Informed Consent
Welcome to our academic survey on **entrepreneurship**!

It should take about 10-15 minutes and is completely confidential. You'll earn **20,000 UGX for participating** in mobile money as a token of appreciation for your valuable time.

We will show you briefly 5 business presentations. The businesses were developed during an entrepreneurship academy at Ugandan universities. We will ask you for your opinion on these businesses. There are no right or wrong answers, we are only interested in your personal opinion!

Your answers are confidential. If you have any questions or issues, please contact Silvia Castro from the research team ([PHONE NUMBER]) or [NAME BANK CONTACT] at [BANK 2].

Thank you so much for your time, Researchers from the Universtity of Munich, Milan and Groningen, (Dr. Vojtech Bartos, Silvia Castro, Dr. Kristina Czura, Timm Opitz)

- Do you agree to participate? [Yes / No]

Attention Check 1/2
We just need to check that the introduction to the survey was clear.

- The businesses we present to you were developed by farmers. [Yes/No]
- The entrepreneurship academy was organized for high school students. [Yes/No]

Pitch Decks
We will now show you the business presentations that were developed during an entrepreneurship academy at Ugandan universities. We will ask you several questions for each presentation.

[IMAGE 1]

NAME 1 [for teams: and NAME 2] founded and now run/s the business. NAME 1 [for teams: and NAME 2 both] went to university, [is/are] between 24-26 years old, and [has/have] a few months of working experience.

Business Descriptions By Pitch Deck

1. Green market is an online platform where farmers connect directly with the buyers where buyers, advertisers, and sellers pay a monthly subscription fee.
2. Versity Deals provide an online platform on which university students can trade within their price range. Vendors pay a monthly subscription fee.
3. Vetman Chicken rears chicken on a small scale in Makerere University and sells mainly to market vendors and hotels.
4. UniChaps provides affordable, nutritional and prompt breakfast mainly in university areas, in a call or a text on WhatsApp.
5. Bin daily provides regular and on call waste collection. Customers pay a fee, collected solid waste is sold for recycling and organic waste composted and sold as fertilizer.

Beliefs About Entrepreneurs
How likely do you think the following statements are?
(We know it's difficult, but try to give your best guess based on the information above and your experience.)
[Likert scale: Extremely unlikely / Somewhat unlikely Neither likely nor unlikely / Somewhat likely / Extremely likely]

- NAME 1 frequently attends networking events for small and medium enterprises
- NAME 1 has received start-up capital from family or friends
- NAME 1 has invested more than 1 million UGX in business assets

- NAME 1 has no family obligations in taking care of young children
- NAME 1 has what it takes to be an entrepreneur
- NAME 1 has received full moral support of family and friends for their the business
- Attention check: Please, select extremely likely here so that we know you are paying attention!
- It is safe for [NAME 1] to run the business and interact with suppliers, competitors and customers
- NAME 1 is fully committed to this business and puts in extensive time and effort.

[Repeated in case of team for NAME 2]

Beliefs about businesses

How likely do you think the following statements are?

(We know it's difficult, but try to give your best guess based on the information above and your experience.)

[Likert scale: Extremely unlikely / Somewhat unlikely Neither likely nor unlikely / Somewhat likely / Extremely likely]

- NAME 1 [for teams: and NAME 2] [has/have] all the skills a successful business needs.
- The business will succeed and earn profits in two years.

[For teams:]

- NAME 1 and NAME 2 communicate well and cooperate in company- related issues
- NAME 1 and NAME 2 are a good team: their skills complement each other perfectly
- NAME 1 and NAME 2 have a clear division: one of them calls the shots and the other one follows the orders
- NAME 1 and NAME 2 regularly struggle with different commitment to the business

Business Success: Determinants

You are now finished evaluating the business ideas and you are almost done! We have some last questions about to get your opinion about entrepreneurial success.

What do you think is important for business success in general?

[Likert scale: Strongly Disagree / Disagree / Neutral / Agree / Strongly Agree]

- Frequent attendance of networking events for small and medium enterprises
- Access to start-up capital from family or friends
- Investing own resources and savings in business to show commitment
- Not having family obligations to care for young children
- Running the business out of pure conviction, not out of necessity
- Focus time and effort exclusively on this business
- Having moral support for business activities from family and friends

Obtaining Loan: Determinants

What do you think is important for obtaining a loan?

[Likert scale: Strongly Disagree / Disagree / Neutral / Agree / Strongly Agree]

- Frequent attendance of networking events for small and medium enterprises
- Access to start-up capital from family or friends
- Investing own resources and savings in business to show commitment
- Not having family obligations to care for young children
- Running the business out of pure conviction, not out of necessity
- Focus time and effort exclusively on this business
- Having moral support for business activities from family and friends

Gender Norms

To conclude, we will ask you a few quick questions on certain roles of men and women in society. These questions are not directly related with the questions on businesses we just asked you, but they

will help us compare to previous studies. Like before, there is no wrong or right answer! We are only interested in your opinion.

How much do you agree with the following statements:
[Likert scale: Strongly Disagree / Disagree / Neutral / Agree / Strongly Agree]

- A man's job is to earn money; a woman's job is to look after the home and family
- Family life suffers when the woman has a full-time job.
- A job is all right, but what most women really want is a home and children.

Demographics

- What is your age? [NUMERIC]
- What is your gender? [Male / Female]
- Do you have children? [Yes / No]
- *[if previous Yes]* How many children do you have? [NUMERIC]
- Do you have family obligations in taking care of young children at the moment or in the past 2 years? [Yes / No]
- How many years of experience working as a loan officer or with customers and loans? [NUMERIC]
- How much to you agree with the following statement? I receive a lot of support from my family and friends in my work career. *[Likert scale: Strongly Disagree / Disagree / Neutral / Agree / Strongly Agree]*

Payoff

Thank you very much for your time, your participation in this survey is of great value to understand what makes a successful entrepreneur. The research team compensates all participants that completed the survey with **20,000 UGX**. You will receive the payment in **two mobile money transfers within 24 hours of completing the survey**.

A.6 Deviations from the Pre-Analysis Plan

1. Our main specification was based on the assumption that there are no significant interaction effects between the gender of the founder and the gender of the implementer. Because this provided not to be true (see e.g., Table 3), we rely on the secondary specification of the pre-analysis plan, which relaxed this assumption. However, we also present the results with the main specification of the PAP, which only includes only dummies for the gender of the founder and implementer (but not the interaction), in Appendix Table A9.
2. We do not split results by loan officer performance/productivity metrics because our partner was only able to provide these for about 50 percent of our sample (225 out of 451 loan officers).