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Working Paper
2019/30/OBH
(Revised version of 2019/19/OBH)

The Gender of Money: How Gender Structures the Market for Entrepreneurial Capital

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July 16, 2019

There is a significant gender gap in the allocation of investment capital to entrepreneurs, but it is unclear what drives this pattern and findings to date have been mixed. Using a unique dataset that lets me observe the matching process between entrepreneur and investor, and includes failed as well as successful matches, I explore how individual preferences and biases combine to skew the distribution of resources between male and female entrepreneurs. I find that, in my setting, women are no less likely than men to receive an investment offer or conclude a financing deal. However, women are far more likely to be funded by female, rather than male, investors. This stems from the combined effects of investor and entrepreneur preferences for partners of the same gender, as well as shared expectations that women are best placed to invest in female-typed businesses. My results point to gender homophily as a contributing mechanism to the gender gap in financing, and highlight how gendered expectations of fit can lead to market segregation.

Keywords: Gender; Economy; Organization of Markets; Entrepreneurship; Venture Capital; Discrimination

Electronic copy available at: http://ssrn.com/abstract=3374926

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Introduction

One of the key challenges facing entrepreneurs is attracting early stage investment. Investors provide much-needed financial support to cash-constrained ventures, as well as more intangible benefits, such as mentoring, giving access to network contacts, or signaling quality to outside observers (Gompers, Mukharlyamov, and Xuan 2016; Hellmann and Puri 2002; Stuart, Hoang, and Hybels 1999). Finding the right investor early on in the life of a new business is critical to that business' long-term success (Kerr, Lerner, and Schoar 2014; Sørensen 2007). At the same time, investors must select investment opportunities with very little information available (Huang and Pierce 2015), knowing that most ventures fail and that they are unable to shift the risk entirely to the entrepreneur (Shane and Cable 2002). The matching process between entrepreneur and investor is therefore consequential to the performance of both parties, and fraught with uncertainty.

Research on gender and entrepreneurial financing suggests that women face additional hurdles in this process. Female entrepreneurs are underrepresented among those that receive angel financing (Knauss, Cain, and Williams 2016) or venture capital, with female-led businesses accounting for less than three percent of venture-backed companies (Brush et al. 2014; Gompers and Wang 2017). There is also some evidence to suggest that female entrepreneurs set lower fundraising targets (Coleman and Robb 2009; Marom, Robb, and Sade 2016) and start businesses that have less high-growth potential and attract less investment (Guzman and Kacperczyk 2019), leading to longer-term performance differentials between male- and female-led businesses (Fairlie and Robb 2009). On the other side of the market, female investors are likewise few in number, comprising six percent of all venture capital partners (Brush et al. 2014; Gompers and Wang 2017), and they may struggle to achieve returns on their portfolio investments on par with their those of their male colleagues (Gompers et al. 2014).

The imbalance between men and women in entrepreneurship and venture capital may be partly due to structural conditions, such as gender differences in social capital (Renzulli, Aldrich, and Moody 2000), or an underrepresentation of women in the pipelines that lead to entrepreneurship and professional investment (Jennings and Brush 2013). At the core of entrepreneurial finance, however, is the entrepreneur-investor relationship. The choices made by both entrepreneurs and investors as they

evaluate each other as potential partners contribute to shaping the market for capital (White 1981). Understanding how gender influences this matching process between entrepreneur and investor is therefore an essential first step in explaining the gender imbalance in the market.

Unfortunately, data limitations plague researchers' efforts to unpack the mechanisms that match investors to entrepreneurs. Data on entrepreneurial financing is usually only available on realized deals, leading to selection on the dependent variable.[1] Studies that seek to correct for this problem, by relying on laboratory data or data from financing platforms, focus on just one side of the matching process, namely how investors evaluate entrepreneurs. The supply side, or how entrepreneurs evaluate investors, has been largely overlooked (see Hsu 2004 for a notable exception). Yet entrepreneurial financing is a "two-sided matching process: actors enter agreements willfully, and, therefore, both counterparties to an exchange must agree to it" (Stuart and Sorenson 2007:219).

Research has provided ample evidence of a gender imbalance in entrepreneurial finance (Brush et al. 2014) that remains significant even after accounting for differences in quality (Guzman and Kacperczyk 2019). Yet it is unclear what drives this pattern and findings have been mixed (Clough et al. 2018). Research based on experimental studies of investor behavior suggest that female-led businesses may receive fewer offers of investment because gender stereotypes negatively affect how they are evaluated (Bigelow et al. 2014; Brooks et al. 2014; Thébaud 2015; Tinkler et al. 2015). But the same pattern could result from investors favoring entrepreneurs of their own gender, because male investors are far more numerous than female investors (Becker-Blease and Sohl 2007; Ewens and Townsend 2019; Greenberg and Mollick 2017; Marom et al. 2016). This is consistent with studies based on pitch competitions, crowd-funding, and angel financing, that have failed to find evidence of an overall bias against female entrepreneurs, but have highlighted the possible role of homophilous preferences in determining which ventures receive financing.

Gender may also influence entrepreneurial decision-making, and in particular how entrepreneurs view investors. It is not uncommon for entrepreneurs who receive offers of financing to

[1] Prior work on the matching market for entrepreneurial capital has relied on imputed data to fabricate counterfactuals of matches that could have hypothetically been realized but were not (Bengtsson and Hsu 2015; Hegde and Tumlinson 2014).

receive multiple, competing offers (Hsu 2004). Yet male and female entrepreneurs may differ in how they respond to offers made to them (Barbulescu and Bidwell 2013; Brands and Fernandez-Mateo 2017), perhaps because they apply different criteria when choosing among these. For example, if male and female entrepreneurs differ in terms of their preferences for similarity over complementarity (Vissa 2011), then relying on data on concluded deals, or examining only investor decision-making, would give an inaccurate picture. Finally, status characteristics theory (Correll and Ridgeway 2006; Ridgeway 2011) predicts that the nature of the business being pitched may also differentially affect how men and women are perceived as potential partners (Lee and Huang 2018; Thébaud 2015). This could affect selection behavior on the part of both investors and entrepreneurs in a way that ultimately skews the gender distribution of financial capital.

Parsing out these different explanations requires us to observe failures as well as successes, at both stages of the entrepreneur-investor matching process. Without observing entrepreneurs who fail to receive offers, as well as investors whose offers are turned down, it is impossible to determine if the gender patterns in realized deals are a result of decision-making biases by male or female investors, or by male or female entrepreneurs; or if sorting according to taste for different types of businesses explains part or all of the gender imbalance.

In this paper, I use data on actual potential matches between entrepreneurs and investors appearing on a televised pitch competition series, where I am able to identify for each entrepreneur-investor pair whether an offer was made by the investor, and whether that offer was subsequently accepted by the entrepreneur. My setting lets me take advantage of high female representation on both the entrepreneur and investor side, as well as random allocation of entrepreneurs to investors, which eliminates the confounding effect of gendered networks. While there is a tradeoff between these empirical advantages and the generalizability of the data, the particularities of this context can be exploited to shed light on mechanisms that would otherwise be difficult to study. Indeed, it is only by observing failed pitches and rejected offers that the effects of gendered preferences on a two-sided market can be properly estimated.

I build on existing research to develop a series of hypotheses about the influence of gender in the allocation of capital to early-stage entrepreneurs. In particular, I make predictions regarding the

impact of homophily and gender congruence on decision-making by investors and entrepreneurs alike. I then test my predictions using data on 570 pitches presented by male or female entrepreneurs to individual investors, for 2,854 investor-pitch pairs. As expected, women represent a minority of the entrepreneurs who conclude investment deals. This is consistent with evidence of underrepresentation of female-led firms among funded ventures. However, in line with other work on crowdfunding and angel financing, my findings support gender homophily as the more likely driver of the gender gap. First, I find that the representation of women among funded entrepreneurs in my setting is proportional to their representation in the initial pool. However, the allocation of capital between entrepreneurs is not gender neutral, as women are disproportionately likely to be funded by female investors. I find that this can be explained at least in part by the homophilous preferences of both male and female investors at the offer stage. This suggests that, when female investors are present in sufficiently large numbers, women may be just as likely as men to obtain financing.

Further, I find that entrepreneurial preferences at the acceptance stage, as well as the influence of business gender type, contribute to the gender skew in the distribution of deals. Female entrepreneurs exhibit strong preferences for investors of the same gender, increasing the prevalence of female-female investment ties. Moreover, stereotype bias operates to shape perceptions of competence such that female investors are more likely to invest in female-typed businesses. Taken together, these results suggest that entrepreneur and investor gender, as well as the stereotypical expectations of performance associated with gender, influence both sides of the matching process, ultimately leading to the gendered allocation of funds to early-stage entrepreneurs and a segregated investment market.

By deepening our understanding of the role of gender in entrepreneur-investor matching, this paper provides insight into how individual preferences and biases shape markets, in a way that skews the distribution of resources between groups. In particular, this paper distinguishes the effects of homophily from those of stereotype bias, which has important practical and social policy implications for achieving gender equality in entrepreneurship. This paper also answers specific calls for research into the entrepreneur as an active, strategic player rather than a passive recipient of investment (Clough et al. 2018; Hallen and Eisenhardt 2012; Stuart and Sorenson 2007).

Theory and Hypotheses

Relationships play a critical role in the life cycle of new ventures (Aldrich and Zimmer 1986), and the relationship between entrepreneur and early-stage investor is arguably the most important. Far more than a transactional agreement to transfer capital from one firm to another, the entrepreneur-investor relationship is fundamentally about connections between individuals: the founder on one side, and the equity investor on the other (Bengtsson and Hsu 2015). That relationship is formed under conditions of extreme uncertainty about the quality of the resources that are to be exchanged, and as a result is not only instrumental but also affective (Huang and Knight 2017). Research has highlighted the importance of social embeddedness, proximity, trust, and intuition in determining how investors and entrepreneurs form ties (Huang and Pierce 2015; Maxwell and Lévesque 2014; Shane and Cable 2002; Sorenson and Stuart 2001; Zott and Huy 2007).

On the investor's side, the decision to invest carries significant risk, not all of which can be shifted to the entrepreneur (Shane and Cable 2002). Moreover, the ultimate success of the investment largely depends on the capabilities and integrity of the founding team (Fried and Hisrich 1994). As a result, and especially given the paucity of information available about the business itself, investors will focus their evaluation on the entrepreneurial team. They will assess the investment opportunity at least in part based on whether they have a favorable impression of the entrepreneur (Bernstein, Korteweg, and Laws 2017; Huang and Pierce 2015), and look for indicators of trust-worthiness and credibility (Maxwell and Lévesque 2014; Zott and Huy 2007).

Similarly, when an entrepreneur accepts equity investment they are entering into a long-term partnership that can have important implications for the future prospects of both the venture and the entrepreneur. While entrepreneurs are often perceived as passive, willing to accept any and all capital offered to them, entrepreneurs are in fact selective when deciding which investors to approach, and which offers to accept. One study found that entrepreneurs often turn down offers of venture capital investment, and that as many as 57 percent of entrepreneurs who received multiple offers rejected the one that presented the best financial terms (Hsu 2004). An early-stage investor brings not only financial resources but also network access, mentorship, and reputational capital (Gompers and Lerner 2004; Hellmann and Puri 2002; Hsu 2004; Jain and Kini 2000). An investor also exerts considerable influence

over the management team, and from his or her position on the board can dictate the replacement of the founder-CEO. The identity of the investment partner is therefore critical to the entrepreneur, who will be motivated to consider not only the venture's need for resources but also questions of trust and interpersonal attraction (Aldrich and Kim 2007; Grossman, Yli-Renko, and Janakiraman 2012; Vissa 2011).

The entrepreneur-investor relationship is therefore one that is deeply personal between individuals, develops under conditions of significant risk on both sides, and requires a high level of trust. As a result, one should expect that heuristics and biases will influence both partners in the matching process. I focus on two such biases, namely gender-homophilous preferences and stereotypical expectations of competence, and consider how they affect investors' and entrepreneurs' evaluations of one another. While I would expect these same mechanisms to influence upstream processes including how investors decide which pitches to hear, and how entrepreneurs choose which investors to approach for financing, this paper explores how gender preferences and biases influence investment offers and entrepreneurs' responses to those offers.

Investors and entrepreneurs prefer to match with partners of the same gender

Homophily, that is, the tendency for individuals to associate and connect with similar others, is a powerful predictor of the shape of social networks (McPherson, Smith-Lovin, and Cook 2001). Although homophilous networks often result from structural constraints, there is ample evidence that, even absent such constraints, individuals prefer to associate with people who resemble them (Centola and van de Rijt 2015) and rate such experiences as more enjoyable (Graves and Powell 1996). This can be explained by the fact that similarity has been shown to breed attraction (Byrne 1971), or because individuals are motivated to favor members of their ingroup over others, in order to preserve or obtain access to scarce resources (Campbell 1965; Sherif and Sherif 1953) or to maintain positive self-esteem (Tajfel and Turner 1979). As a result, individuals will seek out, evaluate more favorably, and award advantages to people with whom they share certain characteristics (Graves and Powell 1996; Tsui and O'Reilly 1989). Although homophily has been observed along a number of dimensions including educational background or religious beliefs, most research has highlighted demographic similarities such as race and gender (McPherson et al. 2001).

Given the relational nature of entrepreneurship, it is hardly surprising that homophily has been shown to influence tie formation in this context, including within venture capital syndicates (Gompers et al. 2016) or among startup founders (Ruef et al. 2003). For example, ethnic homogeneity within a founding team has been found to be 27 times more common than would be expected, even after controlling for opportunity structures, and same-gender teams are five teams more likely than mixed gender teams, disregarding married co-founders (Ruef et al. 2003). Studies that have specifically examined entrepreneurs' tie formation strategies have also found that entrepreneurs are influenced by similarity on demographic characteristics, including ethnicity and gender, when assessing the value of a potential exchange partner (Grossman et al. 2012; Vissa 2011).

Demographic similarity has also been found to predict investment ties, with several studies finding that co-ethnicity between entrepreneur and venture capitalist increases the chance of investment being made, and has a positive effect on the amount invested as well as the degree of investor involvement (Bengtsson and Hsu 2015; Hegde and Tumlinson 2014; but see Zhang, Wong, and Ho 2016, finding that shared ethnicity predicted investment but not necessarily favorable terms). Although these studies could not test the mechanism driving homophilous investment ties, one suggested explanation is that of "personal similarity breeding connection" (Bengtsson and Hsu 2015:340).

While gender, unlike ethnicity, is equally distributed among the general population and thus acts less as a constraint on social ties, gender homophily nonetheless drives relationship formation among children (Smith-Lovin and McPherson 1993), within organizations (Brass 1985; McPherson and Smith-Lovin 1987), and in online communities (Centola and van de Rijt 2015). We should therefore expect gender homophily to influence entrepreneur-investor matching. Yet it need not operate the same way for men and for women. Male homophily is consistent with a preference for similar others, but also with an expectation of greater competence, leading to a perception of greater instrumental value from the connection (Berger, Rosenholtz, and Zelditch 1980; Ridgeway 1991). Status characteristics theory predicts that gender-homophilous ties should not be observed for women within a male-typed context like entrepreneurship. According to this perspective, when success is generally associated with stereotypically masculine traits, women are just as likely as men to expect lower performance from women, and to prefer to associate with men (Ridgeway 1997).

Contrary to that prediction, scholars have found evidence of gender homophily in entrepreneurial ties for both men and women, whether across founding teams (Ruef, Aldrich, and Carter 2003), or in financial backing on crowdfunding platforms (Greenberg and Mollick 2017; Marom et al. 2016) and angel investment (Becker-Blease and Sohl 2007; Ewens and Townsend 2019). This is consistent with earlier work in organizational sociology suggesting that, even in contexts where women might benefit from affiliations with male colleagues, women's organizational networks nonetheless tend to be more homophilous than chance would predict (Brass 1985; McPherson and Smith-Lovin 1987). This could result from a form of activism (Greenberg and Mollick 2017) or bounded solidarity among women, arising out of "the situational reaction of a class of people faced with common adversities" (Portes and Sensenbrenner 1993:1325); or from fundamental gender differences in the expression of gender identity that lead women to consistently show stronger ingroup preferences compared to men (Rudman and Goodwin 2004). Extant evidence therefore tends to indicate that homophilous preferences influence both men and women, including in male-typed environments.

Following the above, gender homophily should influence the matching process between entrepreneurs and investors such that same-gender investment relationships appear more frequently than would be expected by chance. Specifically, I predict that:

> *Hypothesis 1a: A match between the gender of the entrepreneur and the gender of the investor increases the likelihood of an investment offer.*
>
> *Hypothesis 1b: A match between the gender of the entrepreneur and the gender of the investor increases the likelihood than an offer will be accepted.*

Gender-congruence is associated with expectations of competence

While liking often trumps competence in determining tie creation (Casciaro and Lobo 2008), assessments of competence remain influential in partner selection. Investors are attune to indicators of competence from the founding team, such as education or employment background (Beckman, Burton, and O'Reilly 2007; Burton, Sørensen, and Beckman 2002). Similarly, entrepreneurs will look for a certain level of expertise from early-stage investors, who often take a seat on a firm's board and mentor its founders (Gorman and Sahlman 1989). Co-ethnic investment can arguably be explained by investor expertise in screening and working with co-ethnics (Hegde and Tumlinson 2014), as can exchange relations among individuals who speak the same language (Vissa 2011). Entrepreneurs are particularly

likely to seek out partners who they believe possess the skills or knowledge that are priorities for the business (Vissa 2011).

Gender stereotypes shape assessments of competence. In particular, the fit, or lack thereof, between the stereotypical traits assigned to a person's gender and those assigned to a role or task will determine the extent to which an individual is expected to perform well in a particular domain (Eagly and Karau 2002; Heilman 1983). Research has shown that jobs and occupations are often gender typed (Cejka and Eagly 1999). Gender typing can result from the nature of task to be performed. For example, while men are expected to be higher performers overall, especially for tasks requiring mechanical or mathematical ability, women are expected to perform better at tasks seen as nurturing, like nursing or educating young children (Berger et al. 1980; Correll and Ridgeway 2006). The gender composition of the existing labor pool can also lead to gender typing, and reduce individuals' chances of being hired for jobs where candidates of the other gender dominate (Campero and Fernandez 2018). Gender congruence with the task or role, therefore, can have a profound effect on who applies for these jobs (Barbulescu and Bidwell 2013), who is hired (Fernandez and Sosa 2005), and even how well they are able to perform on the job (Doering and Thébaud 2017). While the impact of gender congruence in evaluations of competence appears to be especially significant for women (Correll and Ridgeway 2006; Williams 1992), there is also evidence to suggest that men's advantage over women is greater in male-typed contexts or those where men are in the majority (Campero and Fernandez 2018; Wagner and Berger 1997).

Gender-congruent entrepreneurs are therefore likely to be seen as more competent, compared to gender-incongruent entrepreneurs. What makes an entrepreneur's gender congruent? A study of peer-to-peer lending found that women seeking loans for business purposes, rather than more gender-typical purposes such as home remodeling, were less likely to receive funding (Kuwabara and Thébaud 2017). Research has also shown that female, but not male, entrepreneurs, were perceived as more competent when their business was framed as having social impact, as this was more in keeping with the qualities of warmth and helping stereotypically attributed to women (Lee and Huang 2018). Gender congruence may also affect perceptions of competence when it relates not to the task or the framing of the business

but simply to the product market, with female entrepreneurs receiving more favorable evaluations if they were in the business of manufacturing cupcakes rather than beer (Tak, Correll, and Soule 2019).

Assessments of investor competence should likewise be influenced by the level of congruence between the investor's gender and the gender typing of the activity that is the object of the relationship. This may affect the matching process through its impact on both investor and entrepreneur behavior. Investors may feel better able to screen for, or add value to, businesses with which they feel more of a fit. Gender typing of tasks or roles has been shown to affect not only perceptions of others' abilities, but also perceptions of one's own abilities, and thus an individual's willingness to engage in a gender-incongruent activity (Berger et al. 1980). For example, women evaluate their mathematical skills lower, and their verbal skills higher, compared to men, controlling for actual ability, and these self-assessments influence the likelihood that students enroll in advanced math courses (Correll 2001). Similarly, one study of young professionals found that the gender typing of jobs as masculine or feminine affected individuals' level of identification with those jobs, their expectations of success, and their likelihood to apply (Barbulescu and Bidwell 2013). Extending this logic, the gender typing of the business being pitched may affect the extent to which investors feel competent to evaluate the quality of the new venture and guide it going forward. This should prompt investors to seek out investment opportunities that are gender congruent. As a result, female investors may express more interest in female-typed businesses, while male investors may express more interest in male-typed businesses.

A distinct but related mechanism could lead to the same pattern of results: if investors believe that they are expected to invest in a gender-congruent manner, regardless of whether they have a competence advantage when doing so. According to tokenism theory, the presence of tokens can lead majority members to exaggerate their own stereotypical traits, while encouraging minority members to enact stereotypical roles (Bagues, Sylos-Labini, and Zinovyeva 2017; Kanter 1977). A female investor might therefore express more interest in female-typed businesses because she believes that this is what is required of her, and male investors might leave the female-typed businesses to female investors and pass on such opportunities themselves. Thus, the presence of a small minority of female investors in the male-dominated equity investment field could result in an unspoken division of labor, where male

investors over-invest in male-typed businesses and female investors are encouraged to focus on female-typed businesses.

I further posit that gender congruence between the investor and the founder's business will increase the perceived level of competence of the investor, and make him or her appear as a more valuable partner for the entrepreneur. As discussed above, entrepreneurs seek to develop relationships with those who they believe can bring skills and competencies to the nascent venture (Vissa 2011). Thus, an entrepreneur may expect a male investor to add greater value to a male-typed business, and a female investor to be better able to advise a female-typed business.

From the above, expectations of competence arising from a perceived fit between the gender of the individual and the gender-type of the business should influence both investor and entrepreneur matching decisions, leading me to predict:

> *Hypothesis 2: A match between the business gender type and the gender of the entrepreneur increases the likelihood of an investment offer.*
>
> *Hypothesis 3a: A match between the business gender type and the gender of the investor increases the likelihood of an investment offer.*
>
> *Hypothesis 3b: A match between the business gender type and the gender of the investor increases the likelihood that an offer will result in a deal.*

In sum, I expect gender to exert an influence on both sides of the matching process. First, gender-homophilous preferences should induce male and female investors to evaluate entrepreneurs of the same gender more favorably. They should also make entrepreneurs more likely to accept offers from a same-gender investor. Second, expectations of competence deriving from gender-congruent activities should improve evaluations of gender-congruent entrepreneurs. Similarly, investors who are gender-congruent with the business being pitched should be more willing to extend an offer of investment, and more likely to have their offers accepted.

Data and Methods

Empirical setting

I test my hypotheses using data from the televised series *Shark Tank* (known as *Dragons' Den* in the United Kingdom and Canada), where entrepreneurs present their early-stage businesses to angel investors. This unique setting has the dual advantage of allowing me to observe both sides of the

matching process and to observe successes and failures at each stage. On the series, entrepreneurs pitch their new ventures to a panel of individual investors, in the hopes of obtaining an offer of financing. Panels are typically comprised of five investors, and always include at least one female. Investors are seasoned businesspersons with experience backing young ventures, and are offering to invest their own money.

An episode features a number of pitches, during which the entrepreneur(s) ask for financing in exchange for equity. Each investor can either pass on the opportunity, or express interest by making an offer to put up all or part of the capital requested. Multiple investors can make complementary or competing offers to the entrepreneur. Entrepreneurs are free to reject or accept offers from one or more investors, but they must obtain at least the amount they initially requested to make a deal. These deals are preliminary, as both parties remain free to withdraw from the agreement during the subsequent due-diligence process.[2] Shark Tank has been found to reflect the reality of early-stage investing reasonably well, and data from the show has been used in several entrepreneurial studies (Daly and Davy 2016; Maxwell, Jeffrey, and Lévesque 2011; Pollack, Rutherford, and Nagy 2012). As with other early-stage ventures, most of the businesses that receive investment on the show ultimately fail, but several have achieved success, including GrooveBook, which was sold to Shutterfly for $14.5 million, and Plated, a meal-kit delivery service started by Harvard Business School alumni, which sold for $300 million in 2017. According to one of the angel investors who appeared on both the US and Canadian versions of the series, each individual investor typically has 30 to 40 Shark Tank businesses in his or her portfolio at any one time, and one third of these achieve a successful exit (Berger 2018).

I manually collected information on 652 pitches from the United States (343 pitches), Canada (155 pitches), and the United Kingdom (154 pitches), for a total of 3,264 investor-pitch pairs.[3] Of the 652 pitches, 61 percent were presented by a male entrepreneur or an all-male team, 13 percent by mixed-gender teams, and 26 percent by a female entrepreneur or all-female team. Given the focus of this paper

[2] 44.5 percent of the pitches in my full sample received at least one offer. The preliminary deal rate is 36.5 percent. Media reports estimate that approximately 50 percent of deals concluded on the show ultimately close, resulting in a final deal rate of about 18 percent.

[3] In my data, 648 pitches were presented to the typical panel of five investors, yielding 3,240 investor-pitch pairs. Four pitches were presented to a panel of six investors, yielding 24 more pairs.

and to facilitate interpretation, I removed mixed-gender teams from the analysis, yielding a final sample of 570 pitches and 2,854 investor-pitch pairs. Table 1 presents key descriptive statistics, as well as means comparisons between female and male pitches.

--- Insert Table 1 here ---

In addition to containing data on failed pitches and rejected offers, this setting presents other empirical advantages. Both female entrepreneurs and investors are overrepresented on the show compared to other contexts, providing a sufficiently large sample to measure gender homophily. And while entrepreneurs are not randomly allocated to investors in the strict sense, the composition of the investor panel changes very little over a given year, and there is no evidence suggesting that entrepreneurs seek to appear before certain investors, either by pitching in another country, or by delaying their pitch to another year. As such, the setting eliminates the risk that any difference between entrepreneurs appearing before different investors is due to self-selection or network-based sorting.

There are two primary limitations associated with this data, one concerning selection, the other concerning generalizability. Data was collected from episodes that aired on television, which means that I lack data for entrepreneurs who applied for but were not selected to appear on the show.[4] It is likely that pitch quality differs between those pitches that were retained and those that were not. It is also possible that the gender distribution differs between the two samples, such that female entrepreneurs are overrepresented in the final sample compared to the original pool. This could lead to a difference in the quality distribution of pitches by gender. If that is the case, then we should observe lower funding rates for female entrepreneurs in this setting compared to one where quality was evenly distributed. However, a difference in quality distribution should not affect gendered expectations of fit or entrepreneur preferences.

The second limitation relates to the generalizability of data obtained from a television show, which is edited for entertainment and to some extent artificial, and thus may alter behaviors or represent them in a misleading way. That said, television has previously been exploited for its many advantages as an empirical setting to shed light on theoretical constructs, including discrimination among

[4] Although data on the screening process is not available, it has been said to resemble the process by which entrepreneurs are referred to angel investors (Maxwell et al. 2011).

competitors on the show *Weakest Link* (Levitt 2004), social discrimination and the Prisoners' Dilemma on *Friend or Foe?* (List 2006), and gender differences in preferences for competition on a game show in Colombia (Hogarth, Karelaia, and Trujillo 2012). It is important to remember, moreover, that the seasoned angel investors on Shark Tank do inject substantial amounts of their own financial capital into the businesses they select, and therefore both entrepreneurs and investors can be expected to engage with each other and make decisions in a manner that they believe will best serve their interests.[5]

Dependent variables

To test hypotheses 1a, 2, and 3a regarding the effects of homophily and gender-congruence on the likelihood of receiving an offer, I define the dependent variable as a binary measure capturing whether the investor-pitch pairing resulted in an offer of investment from the investor. As described above, investors first express an interest in the business being pitched by offering to invest a certain amount of capital in return for a specified percentage of equity.[6] Multiple investors may make complementary or competing offers to the entrepreneur, and they may also modify their offer during the course of the presentation.[7] I code an offer as being made if it was made at any time during the entrepreneur's pitch. I code the financial terms of the offer as those representing the best offer, in terms of overall valuation. As reflected in Table 1, approximately 44 percent of all pitches received at least one offer of investment. Of the investor-pitch pairs, just under 20 percent resulted in an offer.

I then use the deal as the dependent variable to test hypotheses 1b and 3b. This is again a binary variable, coded as one if the investor-pitch pair for which an offer was made resulted in a preliminary deal. As noted above, deals agreed on the show are preliminary and subject to subsequent due diligence, during which either party is free to withdraw. Approximately 36 percent of all pitches in my data obtained a preliminary deal, and individual offers converted to a deal 56 percent of the time.

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[5] Barbara Corcoran, one of the investors featured in the US version of the show, has confirmed in writing to other scholars using data from the same source that the show is not scripted and that investors are not asked to make their investment decisions in a way that would be perceived as more entertaining for the audience (Pollack et al. 2012).

[6] Investors are also free to impose additional terms on their offer, such as royalties or a change in personnel.

[7] As previously noted, pitches in this setting are made before a panel of investors, and investor decisions are therefore not independent. It is possible, and in fact likely, that investor assessments of the entrepreneur are influenced by the reactions of their peers. This is not unlike other settings however, such as pitch competitions or demo day pitches where entrepreneurs present before several investors at once. Even in a more traditional venture capital setting, investors are influenced by recommendations and referrals from other investors, and often invest as a syndicate.

Independent variables

My main explanatory variables are binary variables for entrepreneur and investor gender, as well as the gender type of the business. *Female entrepreneur* is equal to 1 if the pitch was presented by either a solo female entrepreneur, or an all-female team. *Female investor* is coded as 1 if the investor in the investor-pitch pair is a female. There are 40 unique investors represented in my sample, of which 13 are female. Some of these investors appear only rarely in my data, because they were guests rather than regulars on the show. Excluding investors who heard fewer than 15 pitches leaves 29 distinct investors, of which 10 are female. The models presented are estimated on samples that include all investors, but results are unchanged when I restrict my analysis to core investors.

Products or services may be gender typed, that is, they may be culturally associated with masculinity or femininity (Tak et al. 2019). Each of the 652 pitches in the original dataset was summarized in one sentence, and rated by a minimum of eight (and a maximum of 15) adults residing in the United States or Canada and recruited via Amazon's MTurk platform (42 percent female, M_{age}=34.4, s.d.=10.1). Raters answered three questions about each business idea in the dataset: Who is likely to use this product or service (from 1: exclusively men, to 7: exclusively women)? To whom should it be marketed (from 1: exclusively men, to 7: exclusively women)? Who do you think is the entrepreneur behind this idea (from 1: definitely a man, to 7: definitely a woman)? Inter-rater reliability ranged from 0.89 to 0.94 (Cronbach's *alpha*). Answers to the three questions were averaged to obtain an overall gender score for each business idea (mean=4.17, s.d.=1.25), with higher scores indicating that the business was perceived as more female-typed. Mean gender scores were significantly lower for male (mean=3.71, s.d.=1.08) than for female entrepreneurs (mean=5.11, s.d.=1.06), confirming that entrepreneurs tend to launch businesses that are somewhat gender congruent. Businesses were coded as being *female-typed* (female-typed = 1) if they obtained scores above the overall mean gender score. My results are robust to excluding all businesses with scores in the middle of the distribution (with gender scores between 3.71 and 5.11).

Across several models I consider the effect of gender matches between individuals, or between an individual and the business. These are coded as 1 if the two share the same gender, for example if

both the investor and the entrepreneur are female, or if the entrepreneur is male and the business being pitch is male-typed. Observations for which gender differs are coded as 0 in these models.

Control variables

I control for two pitch-level characteristics likely to influence offers of investment. First, I control for whether the pitch was presented by a solo entrepreneur (65 percent of the pitches in the data) or by a team, as investors are heavily influenced by information about the founding team (Bernstein et al. 2017), and are likely to assess solo entrepreneurs and teams of entrepreneurs differently. Second, I control for the amount of financing requested, expressed in 2016 US dollars. Not only does the amount requested directly impact the valuation of the business, female entrepreneurs are known to request lower levels of funding (Greenberg and Mollick 2017). In the models investigating entrepreneurs' responses to investment offers, I control for the number of offers received, as well as the terms of the offer by including the investor's valuation of the business in 2016 US dollars. Both the amount of capital requested by the entrepreneur and the investor's valuation of the business are included in the models as logged values to normalize their distributions.

Estimation method

I estimate linear probability models on investor-pitch pair observations in order to test my hypotheses. I include country fixed effects in all models, to account for differences in offer rates between countries resulting from the manner in which the show is edited in that country.[8] Standard errors are robust to heteroskedasticity and clustered at the pitch level. Estimating linear probability models with binary dependent variables can be problematic in certain cases, as predicted probabilities are not constrained to be within 0 and 1 (von Hippel 2015). This is not at issue here, as all predicted probabilities are comfortably within those bounds. However, to ensure that my results are robust to alternative estimation techniques, I also estimated logit models, and obtained substantively similar results. I present the results from the linear probability models here to facilitate interpretation of the coefficients (Hellevik 2009; von Hippel 2015). Given that I test my hypotheses across different subsamples of my data in

[8] The United States version of the show has offer rates that are far higher than in the UK, for example, as the US show typically features only four pitches while an episode in the UK may feature 10 or more.

several instances, I use seemingly unrelated regression to jointly estimate models across the subsamples, and then test for the equality of coefficients across the models.

Results

In my sample, 31 percent of the pitches that resulted in a preliminary deal with at least one investor were presented by one or more women. While this number is far above what we find in angel or venture capital funding, it is consistent with an underrepresentation of women among funded entrepreneurs. However, female entrepreneurs led 30 percent of the pitches in the sample, and represent 29 percent of the pitches that received at least one offer. The level of female representation among realized deals is therefore simply a function of the representation of women in the initial pool, and at the first stage of the matching process (see Figure 1).

--- Insert Figure 1 here ---

I present two-way contingency tables to illustrate the frequency distributions of the data. Table 2a shows the distribution of pitches based on whether they received at least one offer, by entrepreneur gender. As confirmed by the chi-square test of independence (Pearson's $\chi^2 = 0.1545$, $p>0.10$), observed counts did not significantly deviate from expected counts, suggesting that male and female entrepreneurs are equally likely, in this setting, to receive at least one investment offer from the panel. The distribution of pitches that led to a deal is likewise independent of entrepreneur gender (see Table 2b; Pearson's $\chi^2 = 0.0201$, $p>0.10$).

--- Insert Table 2 here ---

However, a closer analysis reveals that gender does play a significant role here. Conditional on at least one offer being made, male investors disproportionately made offers to male entrepreneurs, while female investors favored female entrepreneurs (see Table 3a; Pearson's $\chi^2 = 15.26$, $p<0.001$; Fischer's exact: $p=0.001$). The gender distribution of preliminary deals is slightly less skewed, although deals including only female investors disproportionately involve female entrepreneurs (see Table 3b; Pearson's $\chi^2 = 9.46$, $p<0.01$; Fischer's exact: $p=0.012$). Given this evidence of gendered sorting of entrepreneurs between male and female investors, it is important to dig deeper to understand the role played by gender at the offer stage, and in determining which offers convert to deals.

--- Insert Table 3 here ---

Likelihood of receiving an offer

Table 4 outlines the results of linear probability models predicting the likelihood that an investor-pitch pair results in an investment offer. I first confirm that female entrepreneurs are no less likely to receive an offer, compared to male entrepreneurs (see column 1). This result suggests an absence of general stereotype bias against female entrepreneurs in this context, consistent with recent findings from crowdfunding (Greenberg and Mollick 2017; Marom et al. 2016), angel financing (Ewens and Townsend 2019), or student pitch competitions (Balachandra et al. 2017).

--- Insert Table 4 here ---

I then test the effect of gender homophily, and find that having the same gender as the investor increases the entrepreneur's chances of receiving an offer by six percentage points (see column 2). In the next two columns I run the analysis separately for male and female entrepreneurs, and find that gender homophily has a significant impact on offer rates for both genders, increasing the likelihood of an offer by 6.3 percent for male entrepreneurs and 7.5 percent for female entrepreneurs. A chi-square test confirms that the coefficients for homophily are not significantly different across the two models ($\chi^2 = 0.11$, $p = 0.74$). Thus, I find that male entrepreneurs attract more interest from male investors, and female entrepreneurs are more likely to attract interest from female investors, providing support for Hypothesis 1a.

I argue that this pattern of homophily stems from a preference for investing in and developing a relationship with a demographically similar other. Alternatively, these results could be explained by a screening advantage that flows from the gender type of the business. Thus, it is possible that male investors are better able to identify quality in male entrepreneurs, and female investors are better able to do so for female entrepreneurs, if male and female entrepreneurs tend to lead relatively gender-congruent ventures. To test this possibility, I estimated the model on a sample restricted to 186 gender-neutral pitches (with gender scores between 3.71 and 5.11). I find that in this sample, in which gender-

congruence should play no role, shared gender remains a strong predictor of investment offers, with a coefficient of 0.068 (95% CI [0.019, 0.118], p=0.007).[9]

As noted above, I cannot exclude the possibility that, in this setting, female entrepreneurs are of systematically lower quality compared to male entrepreneurs. Nor am I able to measure entrepreneurial or venture quality, a limitation that affects most archival studies of nascent ventures (Guzman and Kacperczyk 2019). If a systematic difference in quality did exist, then male investor behavior would be rational, rather than driven by homophilous preferences. Female investor behavior, however, could only be explained by homophily. Moreover, this would require us to assume that male investors are rational while female investors are not. Recent data from online angel investing, consistent with my finding of homophilous investment preferences, suggests that there is no reason to make such an assumption (Ewens and Townsend 2019).

In column 5, I test my prediction that entrepreneurs with gender-congruent businesses are more likely to receive offers (H2). The coefficient for gender congruence is positive, but not statistically significant (95% CI [-0.007, 0.063], p=0.119). Additional analyses on sub-samples of male and female entrepreneurs, not reported here, did not reveal any differences by entrepreneur gender. I also separated the samples by investor gender and found a marginally significant effect of entrepreneur gender congruence influencing female investors, but a comparison test of coefficients across the male investor and female investor models suggested they were not significantly different from each other. Hypothesis 2 is therefore not supported.

Turning to the effect of gender congruence at the investor level (H3a, columns 6 through 8), I find that a match between the gender of the investor and the gender type of the business increases the likelihood of an offer by close to four percentage points. Breaking it down between male-typed and female-typed businesses suggests that the effect may be greater for the former, meaning that male investors are more likely than female investors to make an offer of investment for a male-typed business, but not necessarily less likely to make an offer to a female-typed business. This finding must be interpreted with caution, however, as a chi-square test reveals no significant difference between the

[9] Results of all additional analyses are available from the author upon request.

coefficients across the two sub-samples ($\chi^2 = 1.42$, $p = 0.23$). Taken together, my results provide partial support for Hypothesis 3a.[10]

Likelihood of offer converting to deal

I model entrepreneur responses to investment offers by estimating the likelihood that an offer made by the investor will result in a preliminary deal. I present these results in Table 5. I first estimate the impact of gender homophily across the full data sample (H1b), and find no statistically significant effect of an investor having the same gender as the entrepreneur on the likelihood that the investor's offer will result in a deal (column 1). However, when I consider male and female entrepreneurs separately, I find that female entrepreneurs are almost 22 percent more likely to respond positively to an offer from a female investor than to an offer from a male investor (column 3). There is no similar effect of gender homophily for male entrepreneurs ($\chi^2 = 7.41$, $p < 0.01$). Hypothesis 1b is therefore partially supported.

--- Insert Table 5 here ---

Finally, I consider the effect of gender congruence between the investor and the business for which she has made an offer, on the likelihood that an entrepreneur will respond positively (H3b). I find a significant effect of investor-business gender congruence on the likelihood that an offer results in a deal (column 4). Splitting the sample between male-typed and female-typed businesses reveals that this effect concerns primarily entrepreneurs pitching female-typed businesses, who are far more likely to accept offers from female investors than from male investors, while entrepreneurs at the head of male-typed businesses appear indifferent to investor gender ($\chi^2 = 4.78$, $p < 0.05$). Gender congruence therefore seems to be mostly beneficial to female investors, providing partial support for Hypothesis 3b.

A summary of my results with respect to each hypothesis is provided at Table 6. As indicated therein, I fail to find support for my prediction that gender-congruent entrepreneurs would be more attractive to investors (Hypothesis 2). I also find only partial support for Hypotheses 1b, 3a, and 3b,

[10] When businesses with gender scores in the middle of the distribution are excluded, the effect of a match between the investor gender and the gender type of the business is statistically significant across both sub-samples, suggesting male investors are more likely than female investors to make an offer for a male-typed business, and less likely to make an offer for a female-typed business, providing support for Hypothesis 3a.

suggesting that the influence of gender on evaluation and decision-making operates differently for men and women.

--- Insert Table 6 here ---

My findings regarding the impact of gender congruence echo previous work that found that congruence is particularly relevant for women (Correll and Ridgeway 2006; Tak et al. 2019). Assuming that is in fact the case, my failure to find support for an entrepreneur congruence effect here may be due to the small number of incongruent female entrepreneurs, making any such effect difficult to detect. Similarly, the differences in effects for investor congruence across sub-samples could stem from the particular impact of congruence for women. Thus, I find that investor congruence makes female investors more likely to refrain from making offers on male-typed businesses, perhaps because they feel less able to screen for or add value to these businesses, or because they feel that it is not their place to do so. I do not find the same effect for men, unless I exclude gender-neutral businesses, suggesting that men might leave the more strongly female-typed businesses to their female colleagues, possibly out of deference to their expertise.[11]

I also find that investor congruence influences entrepreneurs, but only if they run female-typed businesses. While entrepreneurs at the head of male-typed businesses are equally likely to accept offers from male and female investors, those whose businesses are more stereotypically feminine appear to have a strong preference for offers from female investors. This result may seem surprising, as extant research usually finds that incongruence hurts women more than men, whereas my findings suggest that, in this case, incongruent male investors are less likely to attract entrepreneurs, while gender-congruence provides women with a strong advantage. However, these findings are consistent with the idea that, in this context, masculinity is accepted as the norm. Anything female-typed, however, is likely to be perceived as falling outside the norm, and thus requiring specific knowledge. Women, by the mere fact

[11] It is important to note that, in this context, expectations of gender-typed competence do not appear to be based on any actual indicators of competence, as the background of both the male and female investors in the sample is extremely varied and not limited to gender-congruent fields. Thus, several female investors have experience in male-typed domains such as freight or brewing, while several of the male investors work or have worked in female-typed industries such as home shopping or lingerie.

of their gender, are assumed to be the only ones possessing the requisite expertise, leading to preferential sorting of entrepreneurs with female-typed ventures to female investors.

One of the more surprising findings from this study is the strong effect of gender homophily on female entrepreneurs' responses to offers of investment, and the absence of an equivalent effect for men. I predicted that trust and liking might encourage entrepreneurs to favor investors of their own gender, given the nature of the relationship between the entrepreneur and an early-stage backer.[12] My findings suggest that female entrepreneurs, who are illegitimate outsiders in a context where men predominate, may attach more importance to affective considerations when choosing an early stage investment partner. At the same time, male entrepreneurs may focus exclusively on instrumental factors and less on expectations of personal support from investors, which could explain why I do not find evidence of homophilous preferences for male entrepreneurs in my data. This is consistent with research that suggests that women hold stronger homophilous preferences than men (Rudman and Goodwin 2004), and that those preferences may be especially strong in cases where interpersonal affect is a key driver of the relationship (Ibarra 1992). It is also in line with research on women's labor market preferences, which have been shown to differ in important ways from those of their male peers (Barbulescu and Bidwell 2013; Bertrand 2011; Flory, Leibbrandt, and List 2015).

Discussion and Conclusion

Although it is undeniable that female-led ventures are underrepresented among those that receive equity financing, data on realized deals have made it difficult for scholars to determine whether and how investor evaluations of entrepreneurs and entrepreneur assessments of investors together contribute to this phenomenon. By exploiting a setting that lets me observe both sides of the matching process, and consider successful as well as failed matches, this study provides insight into some of the mechanisms that lead to gendered capital allocation in a two-sided market.

[12] Hsu's (2004) research into entrepreneurs' assessment of investment offers suggests that investor reputation drives offer acceptance. However, given the small sample size of that study and the underrepresentation of women among entrepreneurs and investors, it is possible that the sample was entirely, or primarily, male. Moreover, the goal of this work was to measure the price that entrepreneurs pay for affiliation with reputable venture capitalists, not to investigate the possible role of homophily. Therefore, what we learn from Hsu is that reputation matters, not that it matters more than gender homophily, or to what extent male and female entrepreneurs may differ in their preferences.

While female entrepreneurs conclude a minority of investment deals in my context, I find that this is due to their underrepresentation in the original pool. I find no evidence of general stereotype bias against female entrepreneurs in this setting, as women are just as likely as men to receive an offer of investment. However, I do find that deal distribution is skewed by gender, with female investor-female entrepreneur pairings occurring at a far greater rate than would be expected by chance. My results show that this is due to investor and entrepreneur preferences for matching with partners of the same gender, as well as gender-biased assessments of investor competence.

First, I find that investors are influenced by gender-homophilous preferences when choosing which entrepreneurs to invest in. Male and female entrepreneurs are both more likely to receive offers from investors of the same gender. I also find evidence of strong homophilous preferences among female entrepreneurs, who are far more likely to accept offers from female investors. There is no suggestion in my data that male entrepreneurs express similar preferences. Second, I find that gender congruence influences assessments of investors as suitable partners. Female investors appear less comfortable making offers to male-typed businesses, compared to male investors. At the same time, both male and female entrepreneurs leading female-typed businesses are more receptive to offers received from female investors than from male investors.

Taken together, these results suggest that matching in the market for entrepreneurial finance is not gender neutral, and the organization of the entrepreneurial finance market along with the gender imbalance within it reflect the choices made by entrepreneurs as well as investors. Considerations of interpersonal similarity and gendered assessments of competence on both sides influence how investment ties are formed and how capital is allocated. By unpacking the matching process, this paper deepens our understanding of the mechanisms that contribute to the underrepresentation of women among funded entrepreneurs. In line with data on venture capital financing, only a minority of the entrepreneurs who conclude deals with the investors in my setting are women. However, consistent with recent work exploiting data on crowdfunding and online angel financing (Ewens and Townsend 2019; Greenberg and Mollick 2017), the level of representation of women among funded entrepreneurs is proportional to the level of representation of women among the original pool of entrepreneurs seeking funding. As in the angel financing context, investor decisions in my setting seem to be driven less by

stereotype bias against female entrepreneurs, and more by preferences for entrepreneurs of their own gender.

This contrasts with laboratory studies (see, for example, Brooks et al. 2014), that have found evidence more consistent with stereotype bias against female entrepreneurs among evaluators of both genders. One potential explanation for the discrepancy between these studies and my findings is that social desirability bias operates to make female investors more willing to invest in women in a public, televised setting. However, this mechanism is unlikely to influence decision-making in the far more private setting of online angel financing platforms, where investment patterns also reflect gender-homophilous preferences (Ewens and Townsend 2019). Another possibility is that experimental vignette studies and those analyzing investor reactions to entrepreneur pitches using archival data differ in terms of the anticipated relationship between the evaluator and the entrepreneur. Homophily is far more likely to operate in circumstances where parties expect to be affiliated in some way going forward, whereas it is less likely to affect one-off evaluations such as those conducted in the lab. Further research on this question would prove valuable in determining the conditions under which female decision-makers are more likely to be influenced by homophily, rather than stereotype bias, in their assessments of other women.

Distinguishing stereotype bias from homophilous preferences has important implications not only from a theoretical perspective, but also in terms of its practical and policy implications. My findings on homophily suggests that the gender gap in entrepreneurial financing may be due, at least in part, to the underrepresentation of women within the investment community, rather than a general discounting of female entrepreneur competence. As a result, the presence of female investors in sufficient numbers may lead to women having an equal chance of funding. This is the case in my setting, and is also likely true in the context of crowdfunding and angel investment, where female investors are far more numerous than among venture capital partners.[13] My research therefore highlights the role of demographic representation in shaping market outcomes.

[13] This does not exclude the possibility that female entrepreneurs also do better in contexts such as crowdfunding or angel financing where funding levels (and therefore risk levels) are lower, and businesses tend to be more evenly distributed between male-typed and female-typed industry sectors, compared to the venture capital context.

I find that investor homophily is not the sole driver in the matching process, however, and thus the allocation of capital between male and female entrepreneurs is not determined exclusively by numerical representation. By taking advantage of the unique structure of my data, I am able to show that gendered expectations of investor competence based on congruence also affect deal outcomes. In particular, the unspoken expectation that female investors have particular expertise in female-typed businesses influences investor behavior as well as the choices made by entrepreneurs, leading to a specialization of female investors in gender-congruent segments of the market.

Were investors and entrepreneurs to make decisions independent of gender, the numerical representation of investors in my setting would lead to a deal structure where both male and female entrepreneurs would conclude approximately 60 percent of deals with only male investors, and approximately 17 percent with only female investors (see Figure 2a). Instead, the influence of gender throughout the matching process leads to an observed deal structure that deviates significantly from this gender-neutral ideal, with male entrepreneurs matching disproportionately with male investors, while close to 30 percent of the deals involving female entrepreneurs are concluded solely with female investors (see Figure 2b).

--- Insert Figure 2 here ---

In this paper I find that female entrepreneurs are strongly influenced by investor gender when choosing between multiple offers from investment. It would not be surprising for the same homophilous preferences to influence who female entrepreneurs approach when raising capital. Men, however, appear to be indifferent to investor gender, suggesting that men and women may select and evaluate fundraising opportunities according to different criteria. As is the case in other contexts, women's preferences, motivations, and goals may systematically deviate from those of their male peers (Barbulescu and Bidwell 2013; Bertrand 2011; Flory et al. 2015; Gino, Wilmuth, and Brooks 2015). The influence of gender on the manner in which entrepreneurs search for capital warrants future research.

Another fruitful area for future research is the role of positive biases in either reducing or exacerbating inequalities and segregation by gender. Building on the organizational demography literature, I show that increasing the numerical representation of women on the demand side of the market can open up opportunities for women. However, this occurs because women, like men, express

and act on gender-based preferences. It is important for us to better understand to what extent allowing, or even encouraging gender to influence decision-making leads to desirable outcomes (Abraham 2017; Dencker 2008).

The concern is that the cumulative effect of homophilous preferences and biased assessments of competence will increase gender segregation within the market for entrepreneurial finance. My setting exhibits a clustering of female entrepreneurs paired with female investors, focused on female-typed businesses. Nor is this type of clustering limited to this context. Statistics on venture capital allocation suggest that female investors are far more likely to invest in female entrepreneurs. This could have positive effects for women, for example if female investors are more likely to keep female founders on as CEO, and provide other forms of support, in a way that is beneficial to venture performance. At the same time, the distribution of female representation among entrepreneurs and investors is highly uneven, with women concentrated in sectors like health or consumer services and nearly absent from others (Brush et al. 2014). Ultimately, this gendering of investment capital could lead to women finding themselves contained within niche segments at the periphery of the market (Fourcade 2007; Martell, Emrich, and Robison-Cox 2012; Mehra, Kilduff, and Brass 1998; Schelling 1969). As women increasingly occupy “pink siloes” reserved for them, they could find that their networks decrease in breadth as well as depth, with possible negative consequences for the long-term performance and participation of women in entrepreneurship.

REFERENCES

Abraham, Mabel. 2017. "Pay Formalization Revisited: Considering the Effects of Manager Gender and Discretion on Closing the Gender Wage Gap." *Academy of Management Journal* 60(1):29–54.

Aldrich, Howard E. and Phillip H. Kim. 2007. "Small Worlds, Infinite Possibilities? How Social Networks Affect Entrepreneurial Team Formation and Search." *Strategic Entrepreneurship Journal* 1(1–2):147–65.

Aldrich, Howard E. and Catherine Zimmer. 1986. "Entrepreneurship through Social Networks." Pp. 3–23 in *The Art and Science of Entrepreneurship*. Cambridge, MA: Ballinger.

Bagues, Manuel, Mauro Sylos-Labini, and Natalia Zinovyeva. 2017. "Does the Gender Composition of Scientific Committees Matter?" *The American Economic Review* 107(4):1207–38.

Balachandra, Lakshmi, Tony Briggs, Kim Eddleston, and Candida Brush. 2017. "Don't Pitch Like a Girl!" *Entrepreneurship Theory and Practice* 1–22.

Barbulescu, Roxana and Matthew Bidwell. 2013. "Do Women Choose Different Jobs from Men? Mechanisms of Application Segregation in the Market for Managerial Workers." *Organization Science* 24(3):737–56.

Becker-Blease, John R. and Jeffrey E. Sohl. 2007. "Do Women-Owned Businesses Have Equal Access to Angel Capital?" *Journal of Business Venturing* 22(4):503–21.

Beckman, Christine M., M. Diane Burton, and Charles O'Reilly. 2007. "Early Teams: The Impact of Team Demography on VC Financing and Going Public." *Journal of Business Venturing* 22(2):147–73.

Bengtsson, Ola and David H. Hsu. 2015. "Ethnic Matching in the US Venture Capital Market." *Journal of Business Venturing* 30(2):338–54.

Berger, Joseph, Susan J. Rosenholtz, and Morris Zelditch. 1980. "Status Organizing Processes." *Annual Review of Sociology* 6(1):479–508.

Berger, Sarah. 2018. "Kevin O'Leary Reveals His Big Winners from 'Shark Tank.'" *CNBC*. Retrieved December 7, 2018 (https://www.cnbc.com/2018/12/05/kevin-oleary-reveals-his-big-winners-from-shark-tank.html).

Bernstein, Shai, Arthur Korteweg, and Kevin Laws. 2017. "Attracting Early-Stage Investors: Evidence from a Randomized Field Experiment." *The Journal of Finance* 72(2):509–38.

Bertrand, Marianne. 2011. "New Perspectives on Gender." *Handbook of Labor Economics* 4:1543–90.

Bigelow, Lyda, Leif Lundmark, Judi McLean Parks, and Robert Wuebker. 2014. "Skirting the Issues Experimental Evidence of Gender Bias in IPO Prospectus Evaluations." *Journal of Management* 40(6):1732–59.

Brands, Raina A. and Isabel Fernandez-Mateo. 2017. "Leaning Out: How Negative Recruitment Experiences Shape Women's Decisions to Compete for Executive Roles." *Administrative Science Quarterly* 62(3):405–42.

Brass, Daniel J. 1985. "Men's and Women's Networks: A Study of Interaction Patterns and Influence in an Organization." *Academy of Management Journal* 28(2):327–43.

Brooks, A. W., L. Huang, S. W. Kearney, and F. E. Murray. 2014. "Investors Prefer Entrepreneurial Ventures Pitched by Attractive Men." *Proceedings of the National Academy of Sciences of the United States of America* 111(12):4427–31.

Brush, Candida, Patricia G. Greene, Lakshmi Balachandra, and Amy E. Davis. 2014. *Diana Report. Women Entrepreneurs in 2014: Bridging the Gender Gap in Venture Capital*.

Burton, M. Dian., Jesper B. Sørensen, and Christine M. Beckman. 2002. "Coming from Good Stock: Career Histories and New Venture Formation." Pp. 229–62 in *Social Structure and Organizations Revisited (Research in the Sociology of Organizations, Volume 19)*. Emerald Group Publishing Limited.

Byrne, Donn Erwin. 1971. *The Attraction Paradigm*. New York: Academic Press.

Campbell, Donald T. 1965. "Ethnocentric and Other Altruistic Motives." Pp. 283–311 in *Nebraska symposium on motivation*. Vol. 13.

Campero, Santiago and Roberto M. Fernandez. 2018. "Gender Composition of Labor Queues and Gender Disparities in Hiring." *Social Forces*.

Casciaro, Tiziana and Miguel Sousa Lobo. 2008. "When Competence Is Irrelevant: The Role of

Interpersonal Affect in Task-Related Ties." *Administrative Science Quarterly* 53(4):655–84.
Cejka, Mary Ann and Alice H. Eagly. 1999. "Gender-Stereotypic Images of Occupations Correspond to the Sex Segregation of Employment." *Personality and Social Psychology Bulletin* 25(4):413–23.
Centola, Damon and Arnout van de Rijt. 2015. "Choosing Your Network: Social Preferences in an Online Health Community." *Social Science & Medicine* 125:19–31.
Clough, David R., Tommy Pan Fang, Balagopal Vissa, and Andy Wu. 2018. "Turning Lead Into Gold: How Do Entrepreneurs Mobilize Resources to Exploit Opportunities?" *Academy of Management Annals*.
Coleman, Susan and Alicia Robb. 2009. "A Comparison of New Firm Financing by Gender: Evidence from the Kauffman Firm Survey Data." *Small Business Economics* 33(4):397–411.
Correll, Shelley J. 2001. "Gender and the Career Choice Process: The Role of Biased Self-Assessments." *American Journal of Sociology* 106(6):1691–1730.
Correll, Shelley J. and Cecilia L. Ridgeway. 2006. "Expectation States Theory." *Handbook of Social Psychology* 29–51.
Daly, Peter and Dennis Davy. 2016. "Structural, Linguistic and Rhetorical Features of the Entrepreneurial Pitch: Lessons from Dragons' Den." *Journal of Management Development* 35(1):120–32.
Dencker, John C. 2008. "Corporate Restructuring and Sex Differences in Managerial Promotion." *American Sociological Review* 73(3):455–76.
Doering, Laura and Sarah Thébaud. 2017. "The Effects of Gendered Occupational Roles on Men's and Women's Workplace Authority: Evidence from Microfinance." *American Sociological Review* 82(3):542–67.
Eagly, Alice H. and Steven J. Karau. 2002. "Role Congruity Theory of Prejudice toward Female Leaders." *Psychological Review* 109(3):573.
Ewens, Michael and Richard R. Townsend. 2019. "Are Early Stage Investors Biased Against Women?" *Journal of Financial Economics* in press.
Fairlie, Robert W. and Alicia M. Robb. 2009. "Gender Differences in Business Performance: Evidence from the Characteristics of Business Owners Survey." *Small Business Economics* 33(4):375–95.
Fernandez, Roberto M. and M. Lourdes Sosa. 2005. "Gendering the Job: Networks and Recruitment at a Call Center." *American Journal of Sociology* 111(3):859–904.
Flory, J. A., A. Leibbrandt, and J. A. List. 2015. "Do Competitive Workplaces Deter Female Workers? A Large-Scale Natural Field Experiment on Job Entry Decisions." *The Review of Economic Studies* 82(1):122–55.
Fourcade, Marion. 2007. "Theories of Markets and Theories of Society." *American Behavioral Scientist* 50(8):1015–34.
Fried, Vance H. and Robert D. Hisrich. 1994. "Toward a Model of Venture Capital Investment Decision Making." *Financial Management* 23(3):28.
Gino, Francesca, Caroline Ashley Wilmuth, and Alison Wood Brooks. 2015. "Compared to Men, Women View Professional Advancement as Equally Attainable, but Less Desirable." *Proceedings of the National Academy of Sciences of the United States of America* 112(40):12354–59.
Gompers, Paul A. and Joshua Lerner. 2004. *The Venture Capital Cycle*. Cambridge, MA: MIT Press.
Gompers, Paul A., Vladimir Mukharlyamov, Emily Weisburst, and Yuhai Xuan. 2014. "Gender Effects in Venture Capital." *Available at SSRN 2445497*.
Gompers, Paul A., Vladimir Mukharlyamov, and Yuhai Xuan. 2016. "The Cost of Friendship." *Journal of Financial Economics* 119(3):626–44.
Gompers, Paul A. and Sophie Wang. 2017. *Diversity in Innovation*. Cambridge, MA.
Gorman, Michael and William A. Sahlman. 1989. "What Do Venture Capitalists Do?" *Journal of Business Venturing* 4(4):231–48.
Graves, Laura M. and Gary N. Powell. 1996. "Sex Similarity, Quality of the Employment Interview and Recruiters' Evaluation of Actual Applicants." *Journal of Occupational and Organizational Psychology* 69(3):243–61.
Greenberg, Jason and Ethan R. Mollick. 2017. "Leaning In or Leaning On? Gender, Homophily, and

Activism in Crowdfunding." *Administrative Science Quarterly* 62(2):341–74.
Grossman, Elissa B., Helena Yli-Renko, and Ramkumar Janakiraman. 2012. "Resource Search, Interpersonal Similarity, and Network Tie Valuation in Nascent Entrepreneurs' Emerging Networks." *Journal of Management* 38(6):1760–87.
Guzman, Jorge and Aleksandra Kacperczyk. 2019. "Gender Gap in Entrepreneurship." *Research Policy* 48(7):1666–80.
Hallen, Benjamin L. and Kathleen M. Eisenhardt. 2012. "Catalyzing Strategies and Efficient Tie Formation: How Entrepreneurial Firms Obtain Investment Ties." *Academy of Management Journal* 55(1):35–70.
Hegde, Deepak and Justin Tumlinson. 2014. "Does Social Proximity Enhance Business Partnerships? Theory and Evidence from Ethnicity's Role in US Venture Capital." *Management Science* 60(9):2355–80.
Heilman, Madeline E. 1983. "Sex Bias in Work Settings: The Lack of Fit Model." *Research in Organizational Behavior*.
Hellevik, Ottar. 2009. "Linear versus Logistic Regression When the Dependent Variable Is a Dichotomy." *Quality & Quantity* 43(1):59–74.
Hellmann, Thomas and Manju Puri. 2002. "Venture Capital and the Professionalization of Start-Up Firms: Empirical Evidence." *The Journal of Finance* 57(1):169–97.
von Hippel, Paul. 2015. "Linear vs. Logistic Probability Models: Which Is Better, and When?" *Statistical Horizons*.
Hogarth, Robin M., Natalia Karelaia, and Carlos Andrés Trujillo. 2012. "When Should I Quit? Gender Differences in Exiting Competitions." *Journal of Economic Behavior & Organization* 83(1):136–50.
Hsu, David H. 2004. "What Do Entrepreneurs Pay for Venture Capital Affiliation?" *The Journal of Finance* 59(4):1805–44.
Huang, Laura and Andrew P. Knight. 2017. "Resources and Relationships in Entrepreneurship: An Exchange Theory of the Development and Effects of the Entrepreneur-Investor Relationship." *Academy of Management Review* 42(1):80–102.
Huang, Laura and Jone L. Pierce. 2015. "Managing the Unknowable: The Effectiveness of Early-Stage Investor Gut Feel in Entrepreneurial Investment Decisions." *Administrative Science Quarterly* 60(4):634–70.
Ibarra, Herminia. 1992. "Homophily and Differential Returns: Sex Differences in Network Structure and Access in an Advertising Firm." *Administrative Science Quarterly* 422–47.
Jain, Bharat A. and Omesh Kini. 2000. "Does the Presence of Venture Capitalists Improve the Survival Profile of IPO Firms?" *Journal of Business Finance & Accounting* 27(9-10):1139–83.
Jennings, Jennifer E. and Candida Brush. 2013. "Research on Women Entrepreneurs: Challenges to (and from) the Broader Entrepreneurship Literature?" *The Academy of Management Annals* 7(1):663–715.
Kanter, Rosabeth Moss. 1977. "Some Effects of Proportions on Group Life: Skewed Sex Ratios and Responses to Token Women." *American Journal of Sociology* 965–90.
Kerr, William R., Josh Lerner, and Antoinette Schoar. 2014. "The Consequences of Entrepreneurial Finance: Evidence from Angel Financings." *Review of Financial Studies* 27(1):20–55.
Knauss, Troy, Michael Cain, and Rhys Williams. 2016. *Halo Report*.
Kuwabara, Ko and Sarah Thébaud. 2017. "When Beauty Doesn't Pay: Gender and Beauty Biases in a Peer-to-Peer Loan Market." *Social Forces* 95(4):1371–98.
Lee, Matthew and Laura Huang. 2018. "Gender Bias, Social Impact Framing, and Evaluation of Entrepreneurial Ventures." *Organization Science* 29(1):1–16.
Levitt, Steven D. 2004. "Testing Theories of Discrimination: Evidence from Weakest Link." *The Journal of Law and Economics* 47(2):431–53.
List, John A. 2006. "Friend or Foe? A Natural Experiment of the Prisoner's Dilemma." *Review of Economics and Statistics* 88(3):463–71.
Marom, Dan, Alicia Robb, and Orly Sade. 2016. "Gender Dynamics in Crowdfunding (Kickstarter): Evidence on Entrepreneurs, Investors, Deals and Taste-Based Discrimination." *SSRN: Http://Ssrn.Com/Abstract=2442954*.
Martell, Richard F., Cynthia G. Emrich, and James Robison-Cox. 2012. "From Bias to Exclusion: A

Multilevel Emergent Theory of Gender Segregation in Organizations." *Research in Organizational Behavior* 32:137–62.
Maxwell, Andrew L., Scott A. Jeffrey, and Moren Lévesque. 2011. "Business Angel Early Stage Decision Making." *Journal of Business Venturing* 26(2):212–25.
Maxwell, Andrew L. and Moren Lévesque. 2014. "Trustworthiness: A Critical Ingredient for Entrepreneurs Seeking Investors." *Entrepreneurship Theory and Practice* 38(5):1057–80.
McPherson, Miller and Lynn Smith-Lovin. 1987. "Homophily in Voluntary Organizations: Status Distance and the Composition of Face-to-Face Groups." *American Sociological Review* 370–79.
McPherson, Miller, Lynn Smith-Lovin, and James M. Cook. 2001. "Birds of a Feather: Homophily in Social Networks." *Annual Review of Sociology* 415–44.
Mehra, Ajay, Martin Kilduff, and Daniel J. Brass. 1998. "At the Margins: A Distinctiveness Approach to the Social Identity and Social Networks of Underrepresented Groups." *Academy of Management Journal* 41(4):441–52.
Pollack, Jeffrey M., Matthew W. Rutherford, and Brian G. Nagy. 2012. "Preparedness and Cognitive Legitimacy as Antecedents of New Venture Funding in Televised Business Pitches." *Entrepreneurship Theory and Practice* 36(5):915–39.
Portes, Alejandro and Julia Sensenbrenner. 1993. "Embeddedness and Immigration: Notes on the Social Determinants of Economic Action." *American Journal of Sociology* 98(6):1320–50.
Renzulli, L. A., Howard E. Aldrich, and J. Moody. 2000. "Family Matters: Gender, Networks, and Entrepreneurial Outcomes." *Social Forces* 79(2):523–46.
Ridgeway, Cecilia L. 1991. "The Social Construction of Status Value: Gender and Other Nominal Characteristics." *Social Forces* 70(2):367–86.
Ridgeway, Cecilia L. 1997. "Interaction and the Conservation of Gender Inequality: Considering Employment." *American Sociological Review* 218–35.
Ridgeway, Cecilia L. 2011. *Framed by Gender: How Gender Inequality Persists in the Modern World*. Oxford: Oxford University Press.
Rudman, Laurie A. and Stephanie A. Goodwin. 2004. "Gender Differences in Automatic In-Group Bias: Why Do Women Like Women More Than Men Like Men?" *Journal of Personality and Social Psychology* 87(4):494–509.
Ruef, Martin, Howard E. Aldrich, and Nancy M. Carter. 2003. "The Structure of Founding Teams: Homophily, Strong Ties, and Isolation among US Entrepreneurs." *American Sociological Review* 195–222.
Schelling, Thomas C. 1969. "Models of Segregation." *The American Economic Review* 488–93.
Shane, Scott and Daniel Cable. 2002. "Network Ties, Reputation, and the Financing of New Ventures." *Management Science* 48(3):364–81.
Sherif, Muzafer and Carolyn W. Sherif. 1953. *Groups in Harmony and Tension; an Integration of Studies of Intergroup Relations.* Harper & Brothers.
Smith-Lovin, Lynn and J. M. McPherson. 1993. "You Are Who You Know: A Network Perspective on Gender." Pp. 223–51 in *Theory on Gender / Feminism on Theory,* edited by P. England. New York: Aldine.
Sørensen, Morten. 2007. "How Smart Is Smart Money? A Two-Sided Matching Model of Venture Capital." *The Journal of Finance* 62(6):2725–62.
Sorenson, Olav and Toby E. Stuart. 2001. "Syndication Networks and the Spatial Distribution of Venture Capital Investments1." *American Journal of Sociology* 106(6):1546–88.
Stuart, Toby E., Ha Hoang, and Ralph C. Hybels. 1999. "Interorganizational Endorsements and the Performance of Entrepreneurial Ventures." *Administrative Science Quarterly* 44(2):315–49.
Stuart, Toby E. and Olav Sorenson. 2007. "Strategic Networks and Entrepreneurial Ventures." *Strategic Entrepreneurship Journal* 1(3–4):211–27.
Tajfel, Henri and John C. Turner. 1979. "An Integrative Theory of Intergroup Conflict." *The Social Psychology of Intergroup Relations* 33(47):74.
Tak, Elise, Shelley J. Correll, and Sarah A. Soule. 2019. "Gender Inequality in Product Markets: When and How Status Beliefs Transfer to Products." *Social Forces*.
Thébaud, Sarah. 2015. "Status Beliefs and the Spirit of Capitalism: Accounting for Gender Biases in Entrepreneurship and Innovation." *Social Forces* 94(1):61–86.
Tinkler, Justine E., Kjersten Bunker Whittington, Manwai C. Ku, and Andrea Rees Davies. 2015.

"Gender and Venture Capital Decision-Making: The Effects of Technical Background and Social Capital on Entrepreneurial Evaluations." *Social Science Research* 51:1–16.
Tsui, Anne S. and Charles A. O'Reilly. 1989. "Beyond Simple Demographic Effects: The Importance of Relational Demography in Superior-Subordinate Dyads." *Academy of Management Journal* 32(2):402–23.
Vissa, Balagopal. 2011. "A Matching Theory of Entrepreneurs' Tie Formation Intentions and Initiation of Economic Exchange." *Academy of Management Journal* 54(1):137–58.
Wagner, David G. and Joseph Berger. 1997. "Gender and Interpersonal Task Behaviors: Status Expectation Accounts." *Sociological Perspectives* 40(1):1–32.
White, Harrison C. 1981. "Where Do Markets Come From?" *American Journal of Sociology* 87(3):517–47.
Williams, Christine L. 1992. "The Glass Escalator: Hidden Advantages for Men in the 'Female' Professions." *Social Problems* 39(3):253–67.
Zhang, Jing, Poh Kam Wong, and Yuen Ping Ho. 2016. "Ethnic Enclave and Entrepreneurial Financing: Asian Venture Capitalists in Silicon Valley." *Strategic Entrepreneurship Journal* 10(3):318–35.
Zott, Christoph and Quy Nguyen Huy. 2007. "How Entrepreneurs Use Symbolic Management to Acquire Resources." *Administrative Science Quarterly* 52(1):70–105.

Figure 1 Participation, offers, and deals by gender

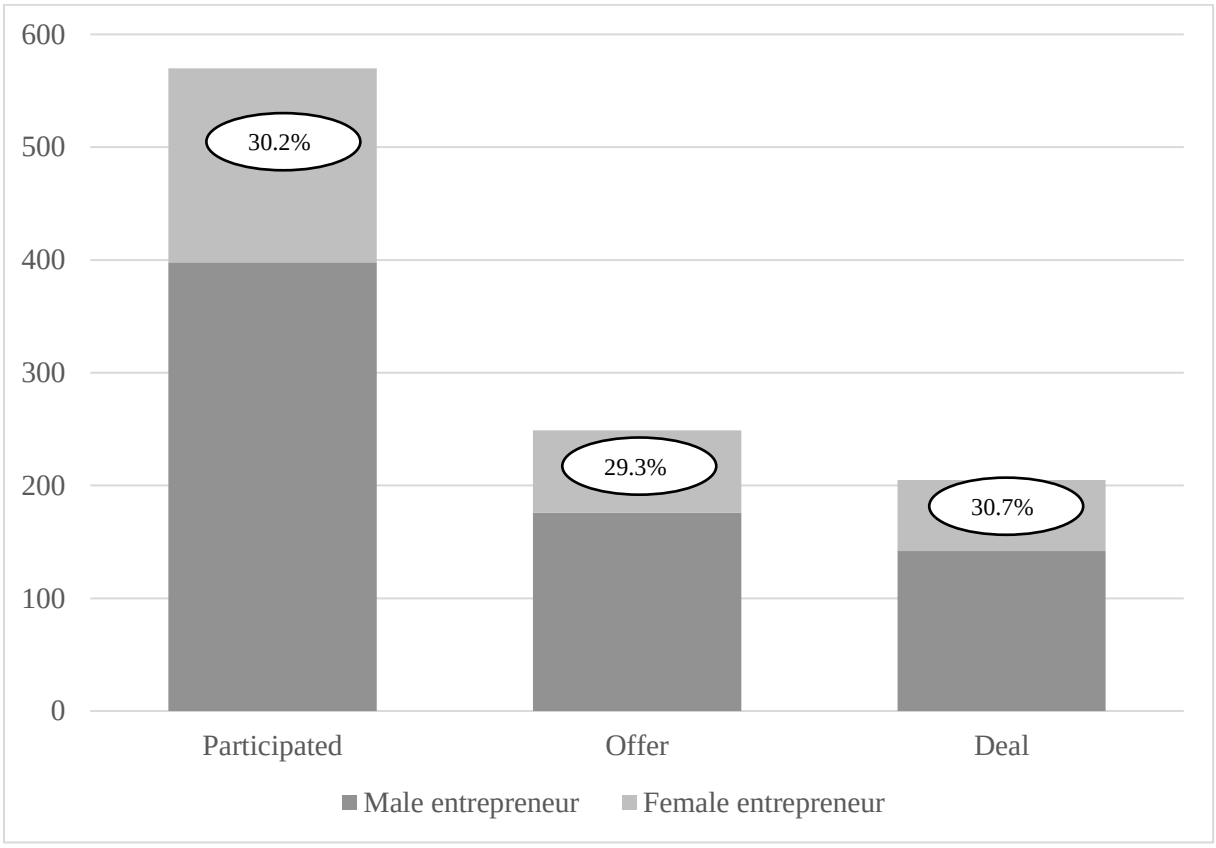
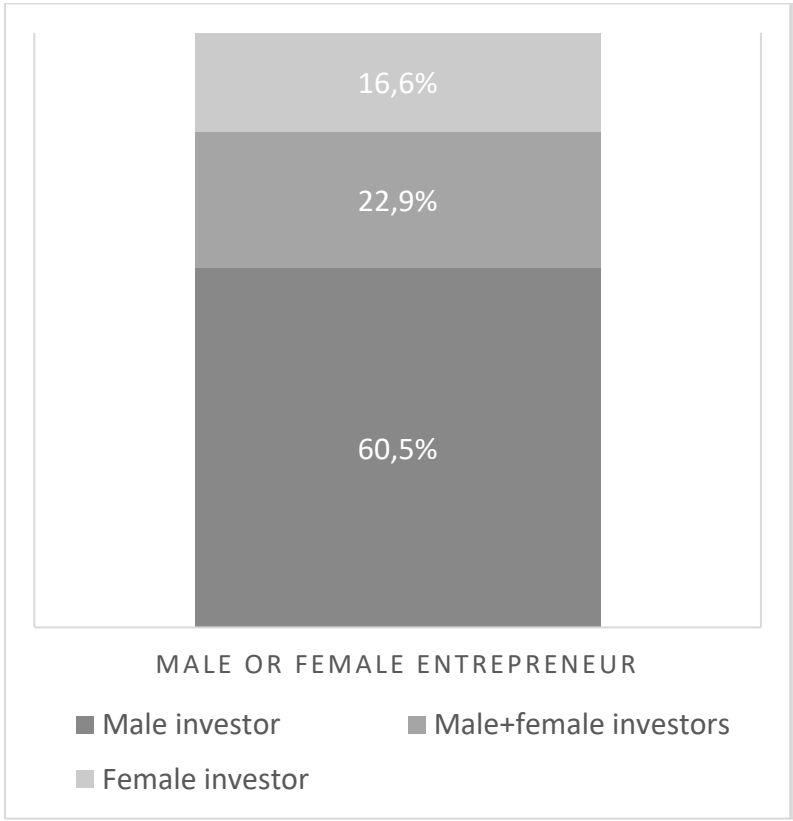


Figure 2 Expected and observed deal structure

a) expected deal structure



b) observed deal structure

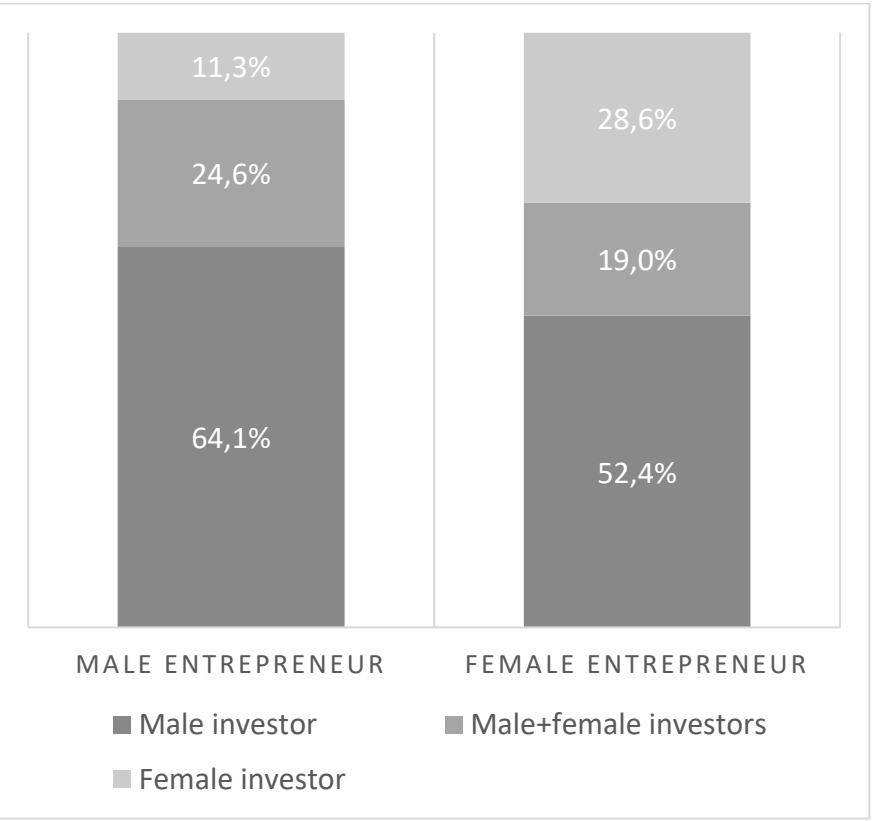


Table 1 Descriptive statistics

		Female pitches			*Male pitches*		
Variables	N	Mean	s.d.	N	Mean	s.d.	|t-stat|
Entrepreneurial team size	172	1.26	0.49	398	1.29	0.53	0.69
Business gender type	172	0.80	0.40	398	0.35	0.48	9.70***
Capital asked for (in 2016 USD)	156	198,364	194,314	364	311,309	409,497	3.29**
Entrepreneur valuation (in 2016 USD)	137	1,398,869	2,351,881	325	2,696,906	4,110,831	3.46***
Investor valuation (in 2016 USD)	73	1,192,239	2,898,155	173	1,344,058	1,952,327	0.48
Offers received per pitch	172	0.89	0.09	398	1.04	0.07	1.21
Investors per deal	63	1.35	0.07	142	1.66	0.08	2.47*

**** p<0.001, ** p<0.01, * p<0.05, † p<0.10. For tests of proportions, z-statistics are reported.*

Table 2 Offers received from and deals concluded with at least one investor

a)

	Did not receive offer	Received offer
Male entrepreneur	222 (224.1)	176 (173.9)
Female entrepreneur	99 (96.9)	73 (75.1)

N=570 pitches; Pearson's Chi2 = 0.1545, expected counts in parentheses

b)

	Did not conclude deal	Concluded deal
Male entrepreneur	256 (254.9)	142 (143.1)
Female entrepreneur	109 (110.1)	63 (61.9)

N=570 pitches; Pearson's Chi2 = 0.047, expected counts in parentheses

Table 3 Offers received from and deals concluded with male only, female only, or male and female investors

a)

	Offer from male(s) only	Offer from male and female investors	Offer from female(s) only
Male entrepreneur			
Observed count	103	66	7
Expected	*92.6*	*70.0*	*13.4*
(Chi2 contribution)	(1.2)	(0.2)	(3.1)
Female entrepreneur			
Observed count	28	33	12
Expected	*38.4*	*29.0*	*5.6*
(Chi2 contribution)	(2.8)	(0.5)	(7.4)

*Conditional on receiving an offer; N=290 pitches; Pearson's chi2(2) = 15.26***; Fisher's exact: p=0.001*

b)

	Deal with male(s) only	Deal with male and female investors	Deal with female(s) only
Male entrepreneur			
Observed count	91	35	16
Expected	*85.9*	*32.6*	*23.6*
(Chi2 contribution)	(0.3)	(0.2)	(2.4)
Female entrepreneur			
Observed count	33	12	18
Expected	*38.1*	*14.4*	*10.4*
(Chi2 contribution)	(0.7)	(0.4)	(5.5)

*Conditional on reaching a deal; N=205; Pearson's chi2(2) = 9.46**; Fisher's exact: p=0.012*

Table 4 Linear probability models predicting offer of investment

		Model H1a			Model H2	Model H3a		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES		*Full sample*	*Male entrepreneurs*	*Female entrepreneurs*		*Full sample*	*Male-typed businesses*	*Female-typed businesses*
Female entrepreneur	-0.009					-0.008	-0.026	0.002
	(0.013)					(0.013)	(0.022)	(0.016)
Female-typed business	0.004	0.010	-0.005	0.028	0.006	0.023		
	(0.025)	(0.024)	(0.030)	(0.043)	(0.024)	(0.026)		
Team	0.051†	0.051†	0.059†	0.024	0.052†	0.051†	0.058	0.054
	(0.028)	(0.027)	(0.033)	(0.046)	(0.027)	(0.028)	(0.040)	(0.037)
Capital ask (logged)	0.007	0.006	-0.004	0.040†	0.009	0.008	-0.009	0.030†
	(0.014)	(0.014)	(0.016)	(0.024)	(0.014)	(0.014)	(0.019)	(0.018)
Entrepreneur-investor gender match		0.060***	0.063**	0.075*				
		(0.017)	(0.019)	(0.032)				
Investor-business gender type match						0.038*	0.059*	0.019
						(0.017)	(0.023)	(0.024)
Entrepreneur-business gender type match					0.024			
					(0.025)			
Constant	0.083	0.048	0.188	-0.400	0.033	0.051	-1.773***	-0.225
	(0.173)	(0.168)	(0.200)	(0.287)	(0.172)	(0.173)	(0.059)	(0.230)
Observations	2,604	2,604	1822	782	2,604	2,604	1,337	1,267
Log likelihood	-1363	-1357	-983	-362	-1363	-1361	-708	-646

Robust standard errors in parentheses, clustered at pitch-level; all models include country fixed effects; *** p<0.001, ** p<0.01, * p<0.05, † p<0.10

Table 5 Linear probability models predicting offer converting to preliminary deal

	Model H1b			Model H3b		
	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	*Full sample*	*Male entrepreneurs*	*Female entrepreneurs*	*Full sample*	*Male-typed businesses*	*Female-typed businesses*
Female entrepreneur				0.007	0.057	-0.029
				(0.025)	(0.061)	(0.031)
Team	0.027	0.072	-0.107	0.021	0.062	-0.033
	(0.048)	(0.056)	(0.075)	(0.048)	(0.069)	(0.060)
Investor valuation (logged)	-0.008	-0.024	0.039	-0.006	0.001	-0.017
	(0.020)	(0.022)	(0.034)	(0.020)	(0.027)	(0.031)
Female-typed business	-0.020	0.001	-0.122			
	(0.047)	(0.056)	0.082			
Nb. of other offers	-0.033	-0.010	-0.111**	-0.032	-0.012	-0.063†
	(0.021)	(0.024)	(0.037)	(0.021)	(0.026)	(0.035)
Female investor						
Entrepreneur-investor gender match	0.020	-0.073	0.218**			
	(0.047)	(0.067)	(0.084)			
Investor-business gender type match				0.098*	-0.006	0.223***
				(0.045)	(0.083)	(0.064)
Constant	0.865**	1.137***	-1.487***	0.778**	-1.431***	-1.446***
	(0.269)	(0.311)	(0.055)	(0.270)	(0.040)	(0.037)
Observations	514	372	142	514	265	249
Log likelihood	-359.6	-256.6	-91.8	-357.4	-182	-169

Robust standard errors in parentheses, clustered at pitch-level; all models include country fixed effects; *** p<0.001, ** p<0.01, * p<0.05, † p<0.10

Table 6 Summary of results

Hypothesis		Mechanism	Outcome	Result	Description
H1a	A match between the gender of the entrepreneur and the gender of the investor increases the likelihood of an investment offer	Homophily	Offer	Fully supported	Male and female entrepreneurs are both more likely to receive an offer from an investor of their own gender
H1b	A match between the gender of the entrepreneur and the gender of the investor increases the likelihood than an offer will be accepted	Homophily	Deal	Partially supported	Female entrepreneurs are more likely to accept offers from female investors
H2	A match between the business gender type and the gender of the entrepreneur increases the likelihood of an investment offer	Entrepreneur congruence	Offer	Not supported	Entrepreneurs with gender-congruence businesses are more likely to receive an offer, but the effect does not reach statistical significance
H3a	A match between the business gender type and the gender of the investor increases the likelihood of an investment offer	Investor congruence	Offer	Partially supported	Female investors are less likely to extend offers to entrepreneurs with male-typed businesses, compared to male investors
H3b	A match between the business gender type and the gender of the investor increases the likelihood than an offer will be accepted	Investor congruence	Deal	Partially supported	Entrepreneurs with female-typed businesses are more likely to accept offers from female investors than from male investors