The Role of Gender in Startup Firm Investment and Exit Performance

by

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High-growth entrepreneurship is overwhelming male. More than half of startups receiving their first round of venture capital (VC) investment in 2017 were run exclusively by men, and just 0.5 percent had all women managers. In order to assess this absence of women, we need to understand whether venture-backed startups with women executives are fundamentally different, the roles that women currently have in these firms and how these considerations influence firm performance. Accordingly, we examine how the gender composition of startups' management teams affects their VC fundraising and exit performances.

Our approach has three parts. First, we assess whether selection drives the result that startups raise less investment when they have women managers by estimating the effect of women managers on investment controlling for a set of observable differences between startups before their first VC round. Specifically, we control for differences in industry, timing, age, development stage, patenting and grant awards. In some specifications, we also control for investment characteristics including the number of investors, the number of rounds and the duration of venture financing.

Second, we explore how the roles that women have within startups influence firm performance. Specifically, we consider the impact of women holding management positions, as well as the role of women founders and serial entrepreneurs, how gender impacts the effect of educational attainment and homophily between women entrepreneurs and women VCs.

We find that women are systematically associated with less venture investment even controlling for selection. We also find that the signaling effect of education and experience is not related to gender, that there do not appear to be gender-based diversity benefits, but that venture capitalists do appear to suffer from gender-based homophily biases. Some of our results are consistent with differing management styles and risk preferences for women, as well as with a lower opportunity cost of entrepreneurship for women. However, the overall picture that emerges in our analyses is one of discrimination against women during VC fundraising.

Finally, we estimate the effect of women managers on exit performance, controlling for investment history and other characteristics. We find that the gender composition of management teams neither affects startups' exit values, nor predicts the ratio of money out over money in (MOOMI). Women appear to be equally good as men when it comes to exit performance.

Theory and Literature

Venture capitalists are generally thought to pursue profit above all else. There is a long-standing sense among VCs that entrepreneurs should be judged first on the returns to investment inherent in their ideas and second on their abilities to realize these returns, management being replaceable. As Kaplan et al. (2009) find, venture capitalists bet more on the business than the management. Thus, we would expect equal gender representation among startup-firm executives, and then adjust this expectation for inherent characteristics of men and women, as well as for societal factors.

New firms vary in working flexibility and other characteristics that may encourage or discourage women's participation. For example, DeMartino and Barbato (2003) find that the prospect of wealth creation motivated male entrepreneurs, while their female counterparts had a higher desire for flexibility. We should therefore expect to see fewer women select into the 24-7 world of startups than into small business ownership. For example, Guzman and Kacperczyk (2018) show that newly registered female-led firms are significantly less likely than male-led firms to become VC backed.

There are a small number of studies that directly consider women in startups receiving VC investment. These include Brush et al. (2002, 2004, 2006, 2017) and Greene et al. (1999, 2001), who provide descriptive statistics for limited samples. These papers collectively demonstrate the underrepresentation of women and find that women managers are associated with lower levels of investment.

While our research validates the extant findings, our main contribution is assessing the effect that women have on investment and exit performance. To do this, we need the context of two broader literatures: one on how women differ from men and another on the determinants of startup investment and exit performance.

Differing risk preference between genders has been long debated. Recent review articles of risk taking experiments, such as Charness and Gneezy (2012), suggest that women are more risk adverse than men, at least in financial decision-making. A related literature suggests that men's risk taking may lead them to be overconfident in investment decisions (see Huang and Kisgen 2013). However, Maxfield et al. (2010), Nelson (2016) and others argue that these conclusions are still contentious.

Bart and McQueen (2013) suggest that women lead more by consensus than fiat. Inclusive and flatter management structures might be advantageous to a startup, particularly in its early stages. Initially flat management is advocated the lean startup methodology (see Blank and Dorf 2012; Ries 2011 and others). A related literature (Richard 2002 and others) suggests that ethnic and cultural diversity within management leads to broader consideration of opportunities.

Men and women may also self-select into firms in different industries because of educational differences. In the US, men have long outnumbered women in STEM and business education. This gap is reflected in the labor market. Beede et al. (2011) find women made up 49 percent of the college-educated workforce in 2009, but only 24 percent of college-educated STEM workers. Stephan and El-Ganainy (2007) find that, among similarly trained scientists, there is a further gender gap with regard to entrepreneurship.

It is also well established that women face labor market discrimination and a 20 percent pay gap in the labor market (AAUW 2018). All else equal, discrimination should give rise to higher levels of women

entrepreneurs. However, a lower opportunity cost may also mean that women select into more marginal ventures.

Education and prior experience – being a "serial entrepreneur" – have both been studied without respect to gender. Hsu (2007) finds a signaling effect for founders with doctoral degrees, and Tinkler et al. (2015) find one for technical degrees; Gompers et al. (2006), Hsu (2007), Zhang (2009), Zhang (2018) and others all find positive effects for serial entrepreneurs, including better odds of funding, greater funding and greater returns on investment. We add to this literature by exploring the value of education and experience signals for women.

Venture capitalists are generally men. Teare and Desmond (2016) report that women make up less than 7 percent of partners at VC firms (we find that women account for 8.75 percent of all listed fund managers). If VCs suffer from gender biases and/or discriminate against women entrepreneurs, this might have considerable impact on women entrepreneurs' ability to raise investment.

Homophily has been identified as a factor in VC decision-making by Shane and Cable (2002) and others. Homophily in venture investment is considered in the context of ethnicity by Bengtsson and Hsu (2015), Hegde and Tumlinson (2014) and others, and in the context of education by Murnieks et al. (2011) and others. We consider homophily with respect to gender.

We also look for evidence consistent with discrimination both during investment and at exit. Brooks et al. (2014) find experienced venture capitalists preferred men's business plan presentations to women delivering the same pitch. Balachandra et al. (2017) find that investors responded negatively to pitch competition participants of either gender whose mannerisms seem "feminine." Similarly, Kanze et al. (2018) established that investors asked women more skeptical questions than men. Malmström et al. (2017) show that European VCs draw on gender stereotypes in describing entrepreneurs and find some evidence that women receive less investment.

Women entrepreneurs could face discrimination that would affect their exit performance because venture capital is not just financial investment, it also comes with value-added treatment effects (see Hellmann and Puri, 2002) which vary in quality (see Hsu 2004 and Hochberg et al. 2007). Venture

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capitalists may discriminate among their portfolio when it comes to allocating time and effort. Exits also need outside organizations, such as lawyers, auditors and underwriters, as well acquirers or investors, which VCs may assist with to varying degrees.

Data and Measures

Thomson-Reuter's VentureXpert provides us with data on the near-population of 48,001 US startup firms that received VC from 1980 to the second quarter of 2018. Data on the management teams and venture funds is self-reported. Thomson-Reuters potentially updates the data after each interaction. We therefore expect that firms that receive more rounds of investment, or achieved exits, will have better coverage.

A total of 30,015 (62.5 percent) of our venture-backed startup firms have one or more managers listed. For startups that do have listed managers, the mean number of managers reported is 5.81 (the median is five). Almost all of the managers listed have their titles reported (96.1 percent). We classified these titles into CEO or president, chairperson, C-level, board members and Vice Presidents (VPs) and above. Only 619 startups (2.1 percent) had titles listed that were not at least VP, so our data is focused almost exclusively on startups' executive teams.

Because Thomson-Reuters does not remove individuals, and as a firm does not have to report all titles, we have 25,543 firms with one or more CEOs, and these firms have an average of 1.15 CEOs each. Our data therefore suffers from a classic error-in-variables problem. Some individuals identified in our data may have left firms by the time investment rounds or liquidity events occur. Likewise, some individuals may have been replaced with others of the opposite gender. This problem will make our estimates of any gender effects conservative.

In total, we have data on 135,864 distinct individuals, who have occupied 194,359 distinct management roles in our sample of venture-backed startups. When the same individual, as denoted by first name and last name, appears in subsequent startups, we mark them as serial entrepreneurs. We also recorded previous experience as a CEO, C-level executive or VP. These measures may overstate true serial

entrepreneurship, as individuals with common names are potentially incorrectly flagged. As a consequence, we expect to understate any effects of serial entrepreneurship.

Almost 95 percent of recorded startup firm individuals have the prefix "Mr" or "Ms"; the remaining 5 percent is split evenly between those with the prefix "Dr" and those without prefixes. We use gender-unique first names from the Mr/Ms-titled individuals to determine the gender for just over half of the remaining managers. The coverage of prefix is good throughout VentureXpert and essentially comprehensive after 1990. We do not include measures of "unknown gendered" individuals in our analyses; they are rare overall and do not appear to affect our results.

We determined which funds invested in which startups and recorded the genders of fund managers. We have details on fund managers for at least one investing fund for 20,819 (69.6 percent) of our venture-backed startups with details on managers. Most funds have fixed lifespans and small turnover of fund managers, especially partners. The coverage is limited because we only have details on fund managers for a set of managers from US funds that made disclosed investments and voluntarily reported their identities.

VentureXpert provides us with considerable detail on the sample of VC-backed startups including: industry and founding date, stage of development at first-round investment and amounts invested, date of investment and the number and characteristics of investors at each round. We use this data to calculate measures including the time from founding to first investment, the time from first investment to last investment, the total amount invested, the number of rounds startups received and the total number of investors participating. Our unit of observation for analysis will be a startup company.

We supplemented our dataset with data taken from Securities Data Corporation's (SDC) Mergers & Acquisitions (M&A), Global New Issues for Initial Product Offerings (IPOs), the United States Patent and Trademark Office for patents and SBIR.gov for Small Business Investment Research (SBIR) and Small Business Technology Transfer grants. Data from each of these sources was joined with our data on venture-backed startups using automated name-based matching, which was validated using date, industry and geographic information. With the exception of SDC's M&A data, each of these datasets provides population data. SDC's M&A data is from filings with the US Securities and Exchange Commission and

supplemented with survey data. Its coverage of large acquisitions by publicly-traded firms, or firms with traded debt, is close to population, but it does not comprehensively cover low-value and private-to-private acquisitions. We also use Consumer Price Index data from the US Bureau of Economic of Analysis to convert all amounts into 2017 dollars.

We follow the convention of marking a startup firm as "dead" if more than five years had elapsed since its last round of investment and no exit event had occurred. We construct an indicator variable called "exit" that takes the value one if a firm experienced an IPO or an acquisition, and the value zero if it is marked as dead. Another indicator variable called "IPO" takes the value one if the startup achieved an IPO and zero if it was acquired. We exclude firms whose estimated death date exceeds the end of the second quarter of 2018, where our data ends.

We also construct other variables from our data including: the count of patents and the number and amount of SBIR grants that startups receive before their first rounds of VC; the exit values, which we set to zero for firms marked as dead, and the MOOMI ratios.

Descriptive Statistics

We divide our firms into three groups: those with men only, those with women only and those with mixed-gender management teams. We use indicator variables to denote these groups in the later analyses.

Women managers are rare in the data. Of the 30,015 startups where we have details of the management team, just 300 (just less than 1 percent) are women only, 13,602 (45 percent) are mixed gender and 16,113 (53 percent) are men only. Thus, the median startup has only male managers. Across all startups, just under one in 10 managers is a woman. This number rises to almost one in five (19.2 percent) within mixed-gender startups.

In Figure 1, below, we look at how the gender composition of VC-backed firms varies over time. Excepting 2018, women-only firms peaked at 2.3 percent of all startups in 2011. Overall, there has been a gradual increase of women-only firms, even though the percentage hit 0 in 1990 and 1994, and stood at just

1.3 percent for 2017. The first half of 2018 suggest that a new trend may be imminent, with the percentage of women-only firms suddenly spiking up to 3.13 percent.

Mixed-gender firms were the most popular form of venture-backed startup in 1999. They follow a quadratic trend from 1981 to 2010, when their incidence was 35 percent, before rising steeply to 47 percent in 2015, then dropping off again. Men-only firms follow the reciprocal trend.

Insert Figure 1 about here

The percentage of women in mixed-gender firms fluctuated between 13 percent and 18 percent from 1980 until 2004, but in 2005 broke out of this range to reach almost one third by 2017.

Perhaps the most important trend in Figure 1 is the sustained rise in women on average across all firms. This rise suffered a mild retrenchment after the dot-com crash, but the percentage of women across all firms has gone from around 4 percent in 1980 to around 14 percent today. However, a linear fit to the data suggests that women would not reach parity with men as startup executives until some time around 2170.

In Table 1 we review how gender varies with industry and stage at which startups received their first investment. Table 1 lists the number of women-only, men-only and mixed-gender firms, as well as the mean and standard error of the percentage of women in mixed firms. We report the gender breakdown of startup firms by industry, using VentureXpert's minor industry code, in the first section of Table 1.

Insert Table 1 about here

Semiconductor firms have the fewest women managers. Just five out of more than 1,500 venture-backed semiconductor startups (0.3 percent) are managed by women-only teams, and women account for only 12 percent of the management of mixed-gender semiconductor firms. At the other extreme, 2.6 percent of consumer-related startups are women only, and women account of over a quarter of the management of mixed-gender firms in this sector. Women are most represented in startups that focus on consumer-related products, "other products," and in medical and health, software and service and Internet-related businesses.

Gender also varies with the stage of development at which firms received investment. Women are statistically significantly less associated with firms that receive seed investment than those that receive early-stage investment. However, the economic differences are modest, and the variation in women's participation by stage of investment is noticeably less than that by industry.

Seed-stage investment is optional; many startups begin venture financing at the early stage. Firms with more women managers may prefer to reach a higher level of maturity before soliciting VC. However, it is also possible that novice women entrepreneurs have more difficulty getting VC investment at the seed stage. The drop in the proportion of women-only firms receiving later-stage investments in Table 1 is consistent with a selection effect -– these firms have lower rate of fundraising success, which we discuss later.

In Table 2, we compare the ratio of women holding titles of CEO (or president), C-level, board member and VP and above, with the overall ratio of women in startups with mixed-gender management teams. The overall ratio of women is potentially different for each sample of firms where at least one person reports a title.

Insert Table 2 about here

Table 2 shows that women are significantly less likely to hold positions of power than men. Our null hypothesis in this table is that women would be equally represented. So, if we observe a ratio of 0.2 women in a firm, then we would also expect to observe a ratio of 0.2 women board members in that firm. This is not the case, and in every test, we reject the null hypothesis with high levels of statistical significance.

The odds of finding a woman CEO are around 60 percent of the naïve odds given by the ratio of women to men. Only 12 percent of firms with mixed-gender management teams had a woman CEO in our data. The odds of finding women improve somewhat as we move down the corporate hierarchy: 14 percent of C-level executives, 15 percent of board members and 19 percent of VPs and above are women. But as around 20 percent of the management teams of firms in these samples are women, we have to conclude that women disproportionately hold the lowest-reported positions in management teams. For doctors, serial

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entrepreneurs and founders, the differences are even more stark. Women are around half as likely to be doctors, serial entrepreneurs or founders as we might expect from overall gender proportions.

The results we present in Figure 1, Table 1 and Table 2 are consistent with results from restricted time periods and subsamples presented elsewhere in the literature. We find that women are drastically underrepresented in startup firms and the extent of their underrepresentation varies materially over time, industry and stage of investment. We also find that women's underrepresentation increases when we consider positions of authority or other notable roles.

In Table 3, we move beyond the prior literature and review the correlations between the incidence of titles, roles and accomplishments for women. Only one correlation is not highly statistically significant – that between women doctors and women serial entrepreneurs. The other correlations vary in magnitude considerably. However, the number of women in the firm is highly significantly correlated with all of our measures. We can therefore use the number of women as a summary measure containing all of the information about women executives in our early analysis. We will then decompose this information into its orthogonal componets when we estimate the effects of women on firms' fundraising and exit performances.

Insert Table 3 about here

Table 4 begins our analysis of the effects of gender on investment and exit performance by summarizing how women-only, men-only and mixed-gender firms differ with descriptive statistics. The first column of Table 4 lists each of our variables. The second, third and fourth columns provide counts and means, with standard errors in parentheses, by the gender type of a startup firm's management.

Although, almost every variable in Table 4 is statistically different across women-only, men-only and mixed firms, some of these differences will disappear once we control for observable measures of women's selection into startup firms.

Insert Table 4 about here

On average, women-only firms have less than half of the number of managers (1.65) as men-only firms (4.34), which in turn, have a little more than half the number of managers of mixed-gender firms (7.64). There are typically almost as many women managers (1.31 on average) in mixed-gender firms as there are in women-only firms.

Men-only firms outperform both women-only and mixed firms on all pre-VC investment measures and on all exit-performance measures. They also do better on around half of the VC investment characteristics; men-only startups receive more venture capital, over a longer duration, and from funds that have higher ratios of women, than the other two types of startups. However, they do receive fewer rounds of investment from slightly fewer investors than mixed-gender startups. But higher numbers are not necessarily better. Women-only startups are younger when they first receive venture capital and are less likely seek SBIR grants first.

For the most part, Table 4 paints a picture of women-only firms not getting very far. On average, they get just over two rounds, totaling about $18m, from about five investors, over a year and a half. Less than 15 percent of them exit, and these exits are only moderate successes worth about $61m on average.

Mixed-gender and men-only firms look much more successful and much more similar. They get three or four rounds, from nine or more investors, totaling about $37m (men-only) to $55m (mixed-gender), over three to four years, then have 32 percent (men-only) to 42 (mixed-gender) chance of an exit, where they typically are valued at around $161 million.

The overall picture in Table 4 is an order of firm types. Women-only firms do worse than men-only firms by a factor of around 2 on most investment measures and exhibit even greater differences on exit measures. Men-only firms, in turn, generally do worse on both investment and exit measures than mixed firms, but the differences are much more modest with factors typically in the 1 to 1.5 range.

The numerator in the MOOMI ratio is the firm's total value at exit, some portion of which may not be appropriable and the rest of which must be shared among stakeholders. An average MOOMI of 0.41 for women-only firms indicates a negative return, and even the MOOMI of 3.58 for men-only firms may not indicate average positive returns to investors.

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Analysis and Results

Our descriptive statistics suggest that women are more likely to participate in some startup firms than others and that their startups underperform in fundraising and at exit. In this section, we use multivariate analysis to attempt to control for some of the selection effects and to give a better estimate of the performance consequences of management teams' gender makeup.

We begin by examining gender differences associated with pre-VC performance. Our measures of pre-VC performance are the number of patents and the amount of SBIR grants that startups receive before their first venture capital investment rounds, as well as the length of time to first investment. In these estimates, we use fixed effects to control for the state of incorporation, the year of first venture investment and industry.

In the first specification of Table 5, we find no statistically significant differences in startup firms' pre-venture patenting associated with the gender composition of management teams. The differences we saw in Table 4 were modest, and once we control for where, when and which startup firms managers select into, the gender differences in pre-VC patenting disappear entirely.

Insert Table 5 about here

In the second and third specifications, we find statistically significant differences in the effects of gender on the amount of SBIR grants and the duration from founding to first investment. These differences have puzzling coefficients, as the effect of the number of women does not align with the effects of men- or women-only firms. In unreported regressions, we find that this is because there are nonlinear effects. While it is interesting to note that men-only firms, and having more women in mixed firms, is associated with reduced SBIR investment and increased time between founding and first investment, our primary purpose here is to determine measures where pre-VC startups differ with respect to gender. We will therefore control for both SBIR investment and age at first investment when we estimate fundraising and exit performance.

In Table 6, we explore differences in gender with respect to three investment characteristics: the number of rounds, the number of investors and the duration of investment. Each of these characteristics is

correlated with the others, as well as with the total amount of investment received. Firms that receive more rounds tend to have more investors and receive more money over a longer period.

In each specification, we control for state, year, industry and stage of investment using fixed effects. We also control for the amount of SBIR grants before venture capital investment and the age of the startup firm at first investment. We refer to these two measures as "Pre-VC controls."

Insert Table 6 about here

We find that firms with more managers do better on each measure: they get more rounds from more investors, and "survive" longer through the VC-financing process. For rounds of investment and funding duration, there is a statistically significant gender effect. Men-only firms do better, women-only firms do worse and mixed firms do better for each additional woman on the management team. However, these effects are economically fairly small. Having a male-only management team, or having an additional woman in a mixed-gender management team, is associated with about a three-month increase in a startup's funding duration or a small fraction of an additional round.

Because the larger management teams are more likely to be mixed-gender management teams, we will include all of the outcome variables in Table 6 as controls in our next analyses. We refer to these variables as investment controls going forward.

Tables 7 and 8 provide the results of our main analyses for the effects for gender on startup firm investment and exit performance. In these tables, we explore the effects of women holding positions of authority or titles of accomplishment.

Table 7 presents the results of regressions with the log of a startup firm's venture capital investment (in millions of 2017 dollars) as the dependent variable. The coefficients therefore represent percentage changes in investment.

In Specification 1 of Table 7, we find that every additional manager increases a startup firm's venture investment by around 6 percent, but that every additional female manager reduces it by around 5 percent. Men-only firms pay a small penalty, raising 3 percent less VC, but women-only firms pay a massive penalty in fundraising, getting almost one third less. These estimates hold their signs and significance but

change their magnitudes as we add more variables describing women's roles and titles, except for the effect of men-only firms, which becomes insignificantly different from zero in later specifications.

In Specification 2, we consider the effects of doctors and serial entrepreneurs. We find that investment reduces by 5.8 percent for every additional MD or PhD in a management team. This result is consistent with Hsu (2007), who found that PhDs have lower odds of financing through a direct tie to an investor but is otherwise somewhat surprising. We also find that the gender of the doctors does not matter. Our results are consistent with doctoral education, or at least the signaling effect of doctoral education, levelling the playing field for women.

Serial entrepreneurs have a material and highly statistically significant effect on their firms' fundraising performance. Each individual that has served on a startup's executive team before increases venture investment by around 8 percent. This estimate is likely conservative as our name-based approach to recording serial entrepreneurs may overstate the number of serials.

When a serial entrepreneur is a woman, the results in Specification 2 of Table 7 suggest that their firms will raise 5 percent more venture capital. This result, which would be consistent with women serials more than overcoming any gender discrimination, disappears in later specifications. Overall, it seems that women serial entrepreneurs provide venture capitalists the same positive signal as their male counterparts do.

Insert Table 7 about here

In Specification 3, we include the measures of the leadership roles and titles that women might hold in a startup firm. We find highly statistically significant and economically meaningful results. Firms with women CEOs raise 21 percent less money, but every additional woman at the C-level or at the VP-level and above increase firms' expected VC investment by 13 percent and 10 percent, respectively. These results are slightly attenuated when we include the next two sets of explanatory variables but their magnitude remains large. These results are not consistent with small differences between the genders, such as in risk aversion or management styles, or with benefits from group diversity.

In Specification 4, it seems that VC funds with higher ratios of women tend to provide less capital. The size of the effect is small and could be consistent with gender-based differences in risk aversion. The interaction between the number of women managers in a startup firm and the ratio of women in the funds that invest in it does not have a statistically significant effect.

Finally, in Specification 5, we again fail to find evidence of homophily in women VCs. We do find that each additional woman founder reduces firms' venture investment by about 15 percent. We feel that this drop is too economically large to be a consequence of some small difference between the genders. It does appear consistent with discrimination.

Despite the reduction in sample size (only some firms report founders and have disclosed, named VCs), Specification 5 is our preferred specification. Most coefficients are broadly consistent across all specifications of Table 7, and using a larger sample with fewer variables does not change the main results in the next analysis.

Overall, the results in Table 7 are consistent with several theories. Women-only firms and firms with more women managers raising less investment is consistent with women having lower opportunity costs and selecting into more marginal projects. This effect is consistent with women having different risk preferences. And that startup firms with more women at the C- and VP-levels raise more money (particularly given the low overall prevalence of women) is consistent with gains from diversity.

However, it is hard to look at the results in Table 7 and not see discrimination: Women-only firms get much less money; firms with more women in their executive team get much less money; firms led by women get much less money; and firms with women founders get much less money. This apparent discrimination appears to be washed away by demonstrable experience or education, as women serials and women doctors appear to be treated just like their male counterparts.

We now examine how gender influences the exit performance of startup firms, taking into account intrinsic and historic gender-based differences in startup firms. In these analyses, we will control for everything that we have looked at so far, including pre-VC performance, startup firms' investment characteristics and the total amount of investment.

The results in Table 8 stand in stark contrast to those in Table 7. In unreported regressions, we estimated the effect of gender on exit value without considering roles and titles. We found essentially no results. In Table 8, where we do consider roles and titles, there are very few gender effects and they have opposing signs and magnitudes so that in aggregate they cancel each other out.

Insert Table 8 about here

In the first specification of Table 8, our exit indicator is the dependent variable. Outside of gender, we find that doctors and serial entrepreneurs matter – both increase the odds on a successful exit. Regarding gender, we find three groups of effects. Women-only firms and firms with more women executives are less likely to achieve an exit. More women at the C- and VP-levels have opposing effects: C-level women reduce the likelihood of an exit, and VP-level women increase it. And women serial entrepreneurs and women CEOs materially increase the odds of an exit but with modest statistical significance.

These gender results are not consistent with gains from diversity or, women-only firms aside, a lower opportunity cost or greater risk aversion for women. We also find no evidence of homophily. Differing leadership styles between genders may matter: It seems unlikely that this is the driving force behind the effect of women CEOs on exit outcomes, given the magnitude of the coefficient, but a consensus management approach might assist in negotiations with potential acquirers and institional investors. Regardless, the woman CEO effect is clearly not consistent with gender discrimination by potential new investors.

Although we control for past investment amounts and characteristics, we can not observe, and so control for, the value-added provided to a startup firm by its VCs. Some of our exit results could therefore be consistent with a value-added effect, either during the investment process or in providing support at exit. The magnitude of the effect of women-only firms on the likelihood of exit, in particular, suggests that something unmeasured but related to the VC process is influencing our results.

In Specifications 2 through 4 of Table 8, we restrict our attention to startups that did successfully exit to ameliorate this issue. This conditioning can not completely eliminate any VC-value-added effect. For example, the valuation startups receive at acquisitions or IPOs may be influenced by negotiations with

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acquirers or underwritters that are supported by VCs. However, results showing that women do not perform worse than men in these specifications would provide evidence that our investment findings are the consequence of behavioral biases.

In our estimations of the effects of gender and team characteristics on whether the startup had an IPO versus an acquisition, as well as its value and MOOMI ratio at its successful liquitidy event, there are only four results to report.

Two of these results are consistently important across each specification and do not concern gender: Firms with more managers do better on each measure, and firms with more doctors do worse. The managers results may be an artifact of our data generating process. Thomson VentureXpert potentially updates its list of managers each time it interacts with startups and our investment measures may be imperfect controls for these interactions. The result for doctors is internally consistent as acquisitions are generally worth less than IPOs. Our industry controls are based on venture-focused high-technology industry classifications, so we do not expect that this is a industry effect. It may be that individuals with M.D.s or Ph.D.s naturally self-select into firms that have a greater propensity to be acquired.

The final two results, which concern gender, have only modest or weak statistical significance. We find that women serial entrepreneurs increase the likelihood of IPOs and that women founders decrease startups' MOOMI ratio. The overwhelming lack of gender results in these specifications is far more interesting. Conditional on achieving successful exits, it seems that the gender composition of management does not matter and that women managers perform equally as well as men in creating value.

Conclusion

Women are rare in startup firms. On average, 10 percent of startup executives are women, and men-only firms are the norm. Some of this disparity appears to be explained by women's apparent differential willingness to participate in certain industries. Women favor consumer-related startups, startups that are not in mainstream industries for VC investment, Internet startups and some medical/health startups. They tend not to participate in semiconductor, communications or industrial startups. Women managers' prevalence rose and fell with the dot-com boom, though our data for the first two quarters of 2018 suggest a sharp recent uptick in women engaging in high-growth entrepreneurship.

Startup firms with women-only or mixed-gender management teams are materially different in their pre-VC investment characteristics. Although we find that management teams' gender makeup is not correlated with startups' patenting prior to VC investment, we find that men-only firms, and mixed-gender firms with higher numbers of women managers, are associated with reduced SBIR grants and increased time between founding and first investment.

Controlling for startups' pre-venture and innate characteristics, we have findings consistent with other theories from the literature, but overall our results paint a picture of discrimination: Women-only firms get much less money; firms with more women in their executive team get much less money; firms led by women get much less money and firms with women founders get much less money.

However, when we control for a startup's venture financing, pre-venture history and innate characteristics, we find no evidence of an aggregate effect of gender on startup firms' likelihood of a successful exit or exit performance. Furthermore, conditional on achieving successful exits, we find no effects from women holding management positions on startup firms' exit performance. It seems that in terms of exit performance, women are equally as good as men. Our exit performance results therefore reinforce that our investment performance findings are driven by a behavioral bias.

We cannot say if our exit performance results would hold if more women received dramatically more venture capital investment, as our findings are neccesarily conditional on the status quo. Nevertheless,

our results suggest that there could be large profits and welfare gains from reducing or eliminating discrimination against women in venture capital funding.

Works Cited

American Association of University Women (AAUW) (2018). "The Simple Truth about the Gender Pay Gap." https://www.aauw.org/research/the-simple-truth-about-the-gender-pay-gap/. Accessed on February 5th, 2018.

Balachandra, Lakshmi, T. Briggs, K. Eddleston, and C. Brush (2017). "Don't Pitch Like a Girl!: How Gender Stereotypes Influence Investor Decisions," in *Entrepreneurship Theory and Practice,* Prepublished https://doi.org/10.1177/1042258717728028. Accessed on February 5th, 2018.

Bart, Chris and G. McQueen (2013). "Why women make better directors," *International Journal of Business Governance and Ethics*, 8 (1), 93.

Beede, David, Tiffany Julian, David Langdon, George McKittrick, Beethika Khan, and Mark Doms (2011). "Women in STEM: A Gender Gap in Innovation." US Department of Commerce, Economics and Statistics Administration, Issue Brief No. 04-11.

Bengtsson, Ola and D. H. Hsu (2015). "Ethnic Matching in the U.S. Venture Capital Market," *Journal of Business Venturing* 30, 338 –354.

Blank, Steve, and B. Dorf (2012). *The Startup Owner's Manual: The Step-by-Step Guide for Building a Great Company.* Pescadero, Calif.: K&S Ranch, Inc.

Brooks, Alison Wood, 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*, 111 (12), 4427–31.

Brush, Candida G., N. M. Carter, P. G. Greene, M. M. Hart, and E. Gatewood (2002). "The Role of Social Capital and Gender in Linking Financial Suppliers and Entrepreneurial Firms: A Framework for Future Research," *Venture Capital,* 4 (4), 305–23.

--- (2004). "Gatekeepers of Venture Growth: A Diana Project Report on the Role and Participation of Women in the Venture Capital Industry," Social Science Research Network. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1260385. Accessed February 5, 2018.

--- (2006). 'The Use of Bootstrapping by Women Entrepreneurs in Positioning for Growth,' *Venture Capital*, 8 (1),15-31.

Brush, Candida, P. Greene, L. Balachandra, and A. Davis (2017). "The Gender Gap in Venture Capital-Progress, Problems, and Perspectives," *Venture Capital,* 20 (2),115–36.

Charness, Gary and U. Gneezy (2012). "Strong Evidence for Gender Differences in Risk Taking," *Journal of Economic Behavior and Organization*, 83 (1), 50–58.

DeMartino, Richard and R. Barbato (2003). "Differences between Women and Men MBA Entrepreneurs: Exploring Family Flexibility and Wealth Creation as Career Motivators," *Journal of Business Venturing*, 18 (6), 815–32.

Gompers, Paul, A. Kovner, J. Lerner and D. Scharfstein (2006). "Skill vs. Luck in Entrepreneurship and Venture Capital: Evidence from Serial Entrepreneurs," working paper in National Bureau of Economic

Research. http://www.nber.org/papers/w12592. Accessed on February 5th, 2018.

Greene, Patricia G., C. G. Brush, M. M. Hart, and P. Saparito (1999). "Exploration of the Venture Capital Industry: Is Gender an Issue?," paper presented at the annual meeting of the Frontiers of Entrepreneurship Research 1999: Proceedings of the Nineteenth Annual Entrepreneurship Research Conference. Babson College.

--- (2001). "Patterns of Venture Capital Funding: Is Gender a Factor?," *Venture Capital,* 3 (1), 63–83.

Guzman, Jorge, and A. (Olenka) Kacperczyk (2018). "Gender Gap in Entrepreneurship," paper under review in *Sloan School of Management, Massachusetts Institute of Technology.* https://docs.wixstatic.com/ugd/f527b9_496243e7237648059a3f50a71a386228.pdf. Accessed on February 5th, 2018.

Hegde, Deepak, and J. Tumlinson (2014). "Does Social Proximity Enhance Business Partnerships? Theory and Evidence from Ethnicity's Role in U.S. Venture Capital," *Management Science,* 60 (9), 2355–80.

Hellmann, Thomas and Manju Puri (2002). "Venture Capital and the Professionalization of Start-Up Firms: Empirical Evidence." *Journal of Finance*, 57 (1), 169–197.

Hochberg, Yael V., Laura A. Lindsey and Mark M. Westerfield (2007). "Resource Accumulation through Economic Ties: Evidence from Venture Capital." *Journal of Financial Economics* 118, 245-267.

Hsu, David H. (2004). "What Do Entrepreneurs Pay for Venture Capital Affiliation?" *Journal of Finance*, 59(4), 1805-1844.

--- (2007). "Experienced Entrepreneurial Founders, Organizational Capital and Venture Capital Funding," *Research Policy,* 36 (5), 722–41.

Huang, Jiekun and D. J. Kisgen (2013). "Gender and Corporate Finance: Are Male Executives Overconfident Relative to Female Executives?" *Journal of Financial Economics*, 108 (3), 822–39.

Kanze, Dana, L. Huang, M. A. Conley and E. T. Higgins (2018). "We Ask Men to Win & Women Not to Lose: Closing the Gender Gap in Startup Funding," *Academy of Management Journal*, 61 (2), 586–614.

Kaplan, Steven N., B. Sensoy and P. Stromberg (2009). "Should Investors Bet on the Jockey or the Horse?: Evidence from the Evolution of Firms from Early Business Plans to Public Companies," *Journal of Finance*, 64 (1), 75–115.

Malmström, Malin, J. Johansson and J. Wincent (2017). "Gender Stereotypes and Venture Support Decisions: How Governmental Venture Capitalists Socially Construct Entrepreneurs' Potential," *Entrepreneurship Theory and Practice,* 41, (5), 833–60.

Maxfield, Sylvia, M. Shapiro, V. Gupta and S. Hass (2010). "Gender and Risk: Women, Risk Taking and Risk Aversion," *Gender in Management: An International Journal,* 25 (7), 586–604.

Murnieks, Charles Y., J. M. Haynie, R. E. Wiltbank and T. Harting (2011). "I Like How You Think': Similarity as an Interaction Bias in the Investor-Entrepreneur Dyad," *Journal of Management Studies,* 48 (7), 1533–61.

Nelson, Julie A. (2016). "Not So-Strong Evidence for Gender Differences in Risk Taking," *Feminist Economics*, 22 (2), 114–142.

Richard, Orlando C. (2002). "Racial Diversity, Business Strategy and Firm Performance: A Resource-Based View," *Academy of Management Journal, 43 (2),* 164–177.

Ries, Eric (2011). *The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses.* New York: Crown Business.

Shane, Scott and D. Cable (2002). "Network Ties, Reputation and the Financing of New Ventures," *Management Science,* 48 (3), 364–81.

Stephan, Paula E. and A. El-Ganainy (2007). "The Entrepreneurial Puzzle: Explaining the Gender Gap," *Journal of Technology Transfer,* 32, 475–487.

Teare, Gené and N. Desmond (2016). "The First Comprehensive Study on Women in Venture Capital and their Impact on Female Founders," in *TechCrunch*. https://techcrunch.com/2016/04/19/the-first-comprehensive-study-on-women-in-venture-capital/ Accessed on February 5th, 2018.

Tinkler, Justine E., K. B. Whittington, M. C. Ku, and A. R. 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.

Zhang, Junfu (2009). "The Advantage of Experienced Start-up Founders in Venture Capital Acquisition: Evidence from Serial Entrepreneurs," *Small Business Economics,* 36 (2), 187–208.

Zhang, Lei. (2018). "Founders Matter! Serial Entrepreneurs and Venture Capital Syndicate Formation." *Entrepreneurship Theory and Practice*, 1-25. DOI: 10.1177/1042258718758641.

Figure 1
Gender in VC-Backed Firms, 1980-2017
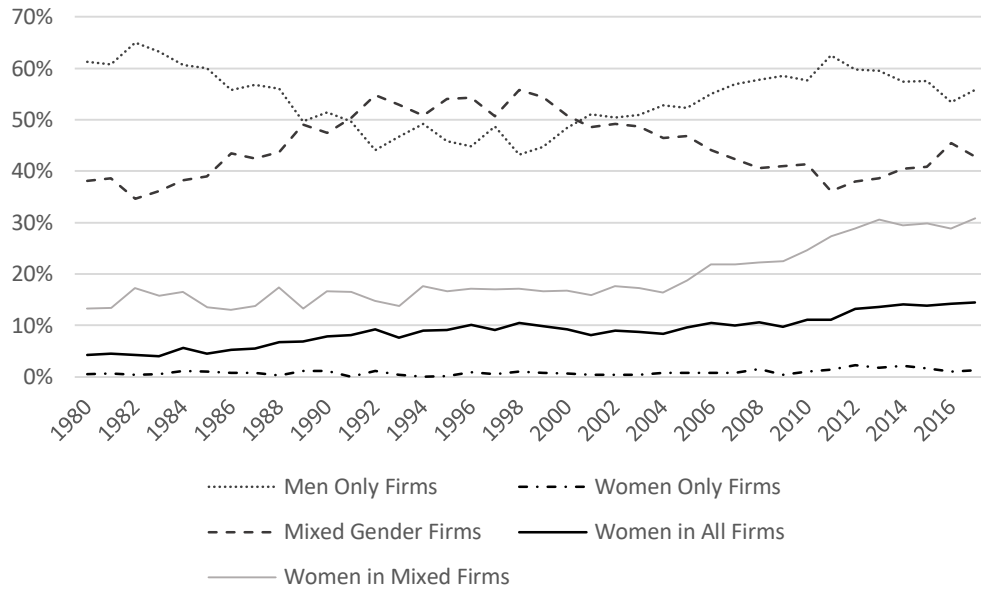
Table 1
Gender of VC-Backed Firms by Industry and Stage

		Number of Firms by Mgmt. Team Gender			% Women in Mixed Firms Mean (SE)
		Women-Only Firms	Men-Only Firms	Mixed Firms	
Industries	Information Technology				
	Comms./Media	13	1,158	752	15% (0.5%)
	Hardware	8	739	440	19% (0.7%)
	Software/Service	53	4,430	3,352	21% (0.3%)
	Internet	116	3,158	2,833	23% (0.3%)
	Semiconductors	5	958	620	12% (0.5%)
Life Sciences	Biotechnology	8	775	1,302	19% (0.4%)
	Medical/Health	22	1,356	1,620	21% (0.4%)
Other	Consumer Related	41	882	647	26% (0.7%)
	Industrial/Energy	7	1,199	488	19% (0.7%)
	Other Product	27	1,448	916	22% (0.5%)
Stage of Investment	Had Seed Stage	43	3,370	2724	18% (0.3%)
	Had Early Stage	174	8,689	7348	21% (0.2%)
	Had Later Stage	38	3,945	4076	19% (0.2%)

Table 2
The Ratio of Women with Titles Compared with their Overall Ratio in Mixed Firms

	Number of Mixed Firms with Title(s)	Mean (Standard Error) for Ratio of Women		
		In the Sample	Holding the Title	Difference
CEO	10,905	0.210 (0.001)	0.122 (0.003)	0.088 (0.003)***
C-Levels	12,271	0.205 (0.001)	0.137 (0.002)	0.068 (0.002)***
Board members	12,621	0.204 (0.001)	0.151 (0.002)	0.054 (0.002)***
VPs and above	12,868	0.206 (0.001)	0.186 (0.002)	0.020 (0.001)***
Doctors	1,091	0.130 (0.004)	0.054 (0.006)	0.076 (0.006)***
Serial Entrepreneurs	9,186	0.184 (0.001)	0.093 (0.002)	0.090 (0.002)***
Founders	4,218	0.247 (0.002)	0.161 (0.005)	0.086 (0.004)***

The number of mixed-gender firms that have one of more of the relevant titles (in column 1) is in column 2. Columns 3 through 5 report means and standard errors. Column 3 reports the mean ratio of women in the mixed-gender firms, column 4 reports the mean ratio of women that holding the title, and column 5 reports the difference between these ratios. For example, there are 10,905 mixed-gender firms with a declared CEO. In these firms, 21.0 percent of executives are women, but only 12.2 percent of these firms have a woman CEO. *** indicates significance with p-values of 0.01 or lower. Significance is only reported for differences.

Table 3
Correlations between Women's Frequency, Roles and Titles

	Frequency	Doctors	Serials	CEO	C-Levels	VP & Above	Founders
Frequency	1						
Doctors	0.0694***	1					
Serials	0.3724***	0.0072	1				
CEO	0.3197***	0.0284***	0.1649***	1			
C-Levels	0.4805***	0.0563***	0.2532***	0.6432***	1		
VPs & Above	0.8833***	0.0746***	0.3944***	0.3425***	0.5369***	1	
Founders	0.2368***	0.0209***	0.0510***	0.3644***	0.2412***	0.2468***	1

Table 3 reports pairwise correlations between the frequency of women, the frequency of women doctors, serial entrepreneurs, CEOs, C-level titles, VP and above level titles and founders. *** indicates statistical significance at the 0.01 level.

Table 4
Descriptive Statistics on Major Variables

	Women-Only Firms		Men-Only Firms		Mixed-gender Firms	
	No.	Mean (SE)	No.	Mean (SE)	No.	Mean (SE)
Number of Managers	300	1.65 (0.06)	16,113	4.34 (0.02)	13,602	7.64 (0.05)
Number of Women					13,602	1.31 (0.01)
Number of Patents pre-VC	274	0.15 (0.07)	15,290	0.18 (0.02)	12,875	0.16 (0.02)
SBIR pre-VC (2017 $m)	274	0.01 (0.01)	15,290	0.03 (0.00)	12,875	0.03 (0.00)
Founding to First VC (years)	300	3.37 (0.49)	16,113	4.6 (0.09)	13,602	4.48 (0.09)
Number of Rounds VC	300	2.33 (0.11)	16,113	3.51 (0.02)	13,602	4.04 (0.03)
Number of VC Investors	300	5.29 (0.37)	16,113	9.32 (0.09)	13,602	11.76 (0.11)
First to Last VC (years)	300	1.61 (0.16)	16,113	3.19 (0.03)	13,602	3.99 (0.04)
VC Invested (2017 $m)	256	17.65 (4.36)	14,802	37.02 (1.45)	12,817	55.28 (1.70)
Ratio of Women in VC Funds	198	0.18 (0.06)	10,959	0.07 (0.00)	9,601	0.09 (0.00)
Had Exit (1/0)	190	0.14 (0.03)	11,722	0.33 (0.00)	10,266	0.42 (0.00)
Had IPO (1/0, Exit=1)	27	0.11 (0.06)	3,810	0.18 (0.01)	4,283	0.28 (0.01)
Exit Value (2017 $m)	190	3.83 (1.58)	11,722	24.58 (2.27)	10,266	37.26 (2.20)
Exit Value (2017 $m, Exit=1)	12	60.7 (19.19)	1,772	162.6 (14.60)	2,380	160.7 (9.05)
MOOMI	155	0.41 (0.17)	10,694	3.58 (1.89)	9,704	7.15 (5.03)

Table 4 provides descriptive statistics on the major variables used in the regression analysis. The number of firms
for which a variable is available, as well as the mean and standard error of the variable, are reported for women-only
firms, men-only firms and mixed-gender firms.

Table 5
Gender and Pre-Venture Capital Firm Performance

	Number of Patents pre- VC	SBIR pre- VC (log 2017 $m)	Founding to First VC (years)
Number of Managers	-0.0149	-0.00123	0.0566*
	(0.0148)	(0.00302)	(0.0300)
Men-Only Firm (1/0)	-0.0796	-0.0714**	0.527***
	(0.140)	(0.0317)	(0.177)
Women-Only Firm (1/0)	-0.336	0.0145	-1.313***
	(0.381)	(0.108)	(0.508)
Number of Women	-0.0423	-0.0436***	0.391***
	(0.0999)	(0.0152)	(0.105)
Constant	1.868	-0.367***	4.432
	(1.362)	(0.0727)	(2.723)
State, Year and Industry F.E.	Yes	Yes	Yes
Observations	28,418	28,418	29,993
(Pseudo) R-Squared	0.0322	0.0503	0.0985

Table 5 reports coefficients and heteroskedastically robust standard errors for three regressions. The dependent variables are the number of patents granted to the firm before it received VC, the log of one plus the amount of SBIR grants (in millions of 2017 dollars) received before venture capital, and the duration (in years) between the firm's founding and its first round of VC investment. The patents are count data and estimated using a negative binomial regression. For this regression, we report a pseudo-R^2. The other dependent variables are estimated using OLS. All regressions include state, year and industry fixed effects.

Table 6
Women and Venture Capital Investment Characteristics

	Number of Rounds of VC	Number of VC Investors	First to Last VC (years)
Number of Managers	0.0434***	0.326***	0.0800***
	(0.00457)	(0.0211)	(0.00896)
Men-Only Firm (1/0)	0.0726**	-0.0749	0.241***
	(0.0368)	(0.152)	(0.0667)
Women-Only Firm (1/0)	-0.200**	-0.139	-0.482***
	(0.0954)	(0.346)	(0.143)
Number of Women	0.0518**	-0.0892	0.239***
	(0.0206)	(0.0840)	(0.0460)
Constant	0.319	1.605	1.913*
	(0.421)	(1.338)	(1.136)
Pre-VC controls	Yes	Yes	Yes
Stage controls	Yes	Yes	Yes
State, Year and Industry F.E.	Yes	Yes	Yes
Observations	28,418	28,418	28,418
R-Squared	0.453	0.422	0.330

Table 6 reports coefficients and heteroskedastically robust standard errors for three regressions estimated using OLS. The dependent variables are the number of VC rounds, the number of venture capital investors participating, and the duration (in years) between the firm's first round of VC investment and its last. All regressions include state, year and industry fixed effects, and stage controls. They also include controls for pre-VC firm characteristics that are related to gender (SBIR grants and founding-to-first duration). ***, ** and * indicate p-values of <0.01, <0.05 and <0.1, respectively.

Table 7
Women and Venture Capital Investment Performance

	(1)	(2)	(3)	(4)	(5)
Number of Managers	0.0645***	0.0464***	0.0464***	0.0373***	0.0366***
	(0.00227)	(0.00281)	(0.00280)	(0.00284)	(0.00284)
Men-Only Firm (1/0)	-0.0294*	-0.0363**	-0.0184	0.00299	-0.00193
	(0.0166)	(0.0171)	(0.0189)	(0.0197)	(0.0197)
Women-Only Firm (1/0)	-0.328***	-0.319***	-0.278***	-0.212***	-0.143*
	(0.0653)	(0.0652)	(0.0669)	(0.0799)	(0.0804)
Number of Women	-0.0520***	-0.0478***	-0.123***	-0.0922***	-0.0910***
	(0.00892)	(0.0101)	(0.0253)	(0.0243)	(0.0244)
Doctors		-0.0587***	-0.0575***	-0.0471***	-0.0476***
		(0.00985)	(0.00998)	(0.0101)	(0.0101)
Women Doctors		0.0582	0.0230	-0.163	-0.160
		(0.119)	(0.122)	(0.112)	(0.113)
Serial Entrepreneurs		0.0814***	0.0804***	0.0748***	0.0747***
		(0.00530)	(0.00526)	(0.00536)	(0.00535)
Women Serials		0.0533**	0.0278	0.0161	0.00876
		(0.0246)	(0.0249)	(0.0247)	(0.0248)
Women CEO			-0.214***	-0.200***	-0.157***
			(0.0379)	(0.0403)	(0.0413)
Women C-levels			0.128***	0.126***	0.117***
			(0.0252)	(0.0260)	(0.0260)
Women VPs and above			0.103***	0.0947***	0.102***
			(0.0238)	(0.0227)	(0.0227)
Ratio of Women VCs				-0.235***	-0.234***
				(0.0258)	(0.0258)
Women VCs x No. Women				0.0153	0.0192
				(0.0159)	(0.0162)
Women Founders					-0.152***
					(0.0344)
Constant	0.422*	0.509**	0.521**	0.596	0.598
	(0.255)	(0.247)	(0.245)	(0.515)	(0.515)
Investment controls	Yes	Yes	Yes	Yes	Yes
Pre-VC Controls	Yes	Yes	Yes	Yes	Yes
Stage controls	Yes	Yes	Yes	Yes	Yes
State, Year and Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observations	26,398	26,398	26,398	18,914	18,914
R-Squared	0.479	0.486	0.487	0.550	0.550

Table 7 reports five specifications, estimated using OLS, where the dependent variable is the log of one plus the total amount of VC investment the firm received in 2017 dollars. ***, ** and * indicate p-values of <0.01, <0.05 and <0.1, respectively. All specifications include state, year, industry and stage fixed effects, as well as pre-VC firm characteristic controls. They also include controls for the investment characteristics explored in Table 5 (no. rounds, no. investors, and first-to-last duration).

Table 8
Women and Venture Capital Exit Performance

	Had Exit (1/0)	Conditional on Exit=1		
		Had IPO (1/0)	Exit Value (log 2017 $m)	Money Out/In (log)
Number of Managers	0.00934	0.135***	0.0463***	0.00954***
	(0.00679)	(0.0135)	(0.00826)	(0.00362)
Men-Only Firm (1/0)	-0.0366	-0.00742	0.00187	-0.0101
	(0.0504)	(0.101)	(0.0681)	(0.0286)
Women-Only Firm (1/0)	-0.550*	0.812	0.510	0.153
	(0.302)	(0.871)	(0.431)	(0.210)
Number of Women	-0.191***	-0.0258	-0.0296	-0.0218
	(0.0547)	(0.121)	(0.0583)	(0.0250)
Doctors	0.121***	-0.198***	-0.0667**	-0.0370***
	(0.0300)	(0.0438)	(0.0316)	(0.0125)
Women Doctors	-0.161	0.647	0.0779	0.0563
	(0.302)	(0.494)	(0.364)	(0.149)
Serial Entrepreneurs	0.110***	0.0256	0.0181	0.00581
	(0.0149)	(0.0267)	(0.0185)	(0.00726)
Women Serials	0.125*	0.226**	0.0768	0.0161
	(0.0709)	(0.106)	(0.0798)	(0.0297)
Women CEO	0.219*	-0.186	0.0232	0.00305
	(0.115)	(0.236)	(0.155)	(0.0650)
Women C-levels	-0.257***	0.124	-0.0377	0.0139
	(0.0719)	(0.128)	(0.0964)	(0.0356)
Women VPs and above	0.274***	-0.0460	0.0384	0.0145
	(0.0576)	(0.132)	(0.0609)	(0.0253)
Ratio of Women VCs	0.00177	-0.247	-0.0935	-0.0591
	(0.0846)	(0.235)	(0.112)	(0.0544)
Women VCs x No. Women	0.0248	-0.110	-0.00431	0.00711
	(0.0597)	(0.189)	(0.0650)	(0.0317)
Women Founders	-0.00630	-0.654	-0.263	-0.110*
	(0.115)	(0.471)	(0.166)	(0.0664)
Constant	-1.810**	-3.166***	0.769	0.900***
	(0.713)	(1.037)	(0.508)	(0.208)
Investment (w/ amount) controls	yes	yes	yes	yes
Pre-VC controls	yes	yes	yes	yes
Stage controls	yes	yes	yes	yes
State, Year and Industry F.E.	yes	yes	yes	yes
Observations	13,933	6,095	6,095	6,095
(Pseudo) R-Squared	0.128	0.333	0.259	0.113

Table 8 reports four estimations where the dependent variables whether the firm had an exit, whether the firm had an IPO (conditional on having an exit), the log of one plus the exit value of the firm in 2017 dollars (assumed to be 0 if the firm died), and the log of the MOOMI ratio. ***, ** and * indicate p-values of <0.01, <0.05 and <0.1, respectively. The first two specifications are estimated using logistic regression, the second two specifications are estimated using OLS. All specifications include state, year, industry and stage fixed effects, as well as pre-VC firm and VC investment characteristic controls. They also include controls for the amount of VC investment.