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A gendered view of Risk Taking in Venture Philanthropy

ABSTRACT

Relying on gender-role congruity theory, this paper investigates the relationship between the gender of the top management teams of venture philanthropy firms and their business risk-taking orientation. The research also assesses if and how experience moderates this relationship. Using a combination of survey data to capture the venture philanthropy firm's risk orientation and biographical data to identify managers' gender and experience, it finds that only gender affects business risk-orientation in these firms. Surprisingly, this is the opposite direction than expected, whereby teams with a higher proportion of women have a higher risk-taking profile. This suggests the need to revise the applicability of gender role congruity theory, the existence of a gender-bind dilemma, and the relevance of context in venture philanthropy.

Keywords: Gender, human capital, impact investing, risk-taking, social investing, venture philanthropy.

1. INTRODUCTION

The social, ethical and environmental pressures of health, climate change, water and food scarcity, large-scale migration and increased inequality continue to grow (WEF, 2019). Impact investing is a novel approach to fund significant, innovative solutions to social problems (Rahdari, Sepasi, and Moradi, 2016; Mudaliar et al., 2019). Impact investors are financial intermediaries that intentionally seek economic and social returns (Nicholls, 2010; Ormiston et al., 2015). Microfinance, venture philanthropy, social bonds and the specifically created impact-investing arms of traditional investors (banks, pension funds, family offices and foundations) are subsets of the broader impact-investing sector. The impact-investing market is estimated to be worth \$239 billion (Mudaliar et al., 2019).

In this study we focus on venture philanthropy (VP), a sub-set of impact investing that adopts the investing practices of traditional venture capital (VC) to fund social enterprises (Letts et al., 1997; Scarlata, Walske and Zacharakis, 2017). VP investors select investments with growth potential, supply capital, monitor and add value to their portfolio of investments during the process and exit after a multi-year investment period. VP firms are hybrid organisations as their investment proposition encompasses the maximisation of economic and social returns (Scarlata, Alemany, and Zacharakis, 2012). Although there are no figures for VP globally, the European Venture Philanthropy Association reports in 2020 European VP firms invested €6.2 billion in an average of 35 investments per investor (EVPA, 2021).

There is limited academic work on VP (Daggers and Nicholls, 2016). Scarlata, Zacharakis and Walske (2016) suggest VP firms fund socially innovative social enterprises when their founders have more business-oriented experience. Other work, such as Lumpkin and Bacq (2019), examines how societal impact can be generated. Hehenberger and Harling (2018) delve into how returns are measured in VP, acknowledging a lack of consideration of the risk component of VP investments. However, VP investors do implement business-oriented investing practices to deploy capital efficiently, making them subject to business risk. At the same time, the social enterprises that VP firms back adopt entrepreneurially oriented behaviour to develop market-based solutions to social problems. Consequently, both VP firms and the social enterprises undertake business risks (Lumpkin and Bacq, 2019; Luke and Chu, 2013).

As little is known about risk-taking in VP, it follows that little is known about how gender and experience influence it. Byrnes, Miller and Schaefer (1999) show that gender does influence risk-taking. Men are bigger risk-takers in a variety of behaviours that can lead to premature death, such as drinking alcohol, sexual activities, driving and gambling; whereas women take

less risk when making personal financial decisions (Jianakoplos and Bernasek, 1998). Faccio, Marchica and Mura (2016) suggest that firms run by female CEOs have lower risk-taking orientation. At the same time, Sitkin and Pablo (1992) show that experience influences the risk undertaken by VC investors. Still, Dimov and Shepherd (2005) suggest VC firms' managers with greater experience take fewer risks as evidenced by the lower number of bankruptcies; whereas Zacharakis and Shepherd (2001) argue that higher experience makes VC investors overconfident in their decision-making, thus increasing their risk-taking orientation.

This literature identifies a relationship between gender, experience and risk-taking orientation. The research question this paper seeks to answer is: What is the relationship between gender, experience and the business risk-taking orientation of VP firms? In other words, do gender and experience influence the level of risks undertaken by VP firms? To answer this question, our research relies on gender-role congruity theory (Eagly and Karau, 2002) and human-capital theory (Becker, 1964) to formulate a set of hypotheses. Hypotheses are tested using survey responses from VP investors in Europe, the US and Asia. Contrary to expectations, results show that VP firms with a higher proportion of women have a higher business-risk profile; whereas experience does not have a significant effect.

This research contributes to theory and practice. From a theoretical point of view, it is one of the first attempts to spur an intellectual conversation on the determinants of business risk in hybrid organisations, such as VP firms. Results suggest the existence of a gender double-bind dilemma, whereby women act differently from what is stereotypically expected due to the hybrid nature of the organisations they work for (financial versus social returns). From a practitioner's perspective, this research suggests that actors who deploy resources to VP firms (i.e., the equivalent of limited partners in the VC sector) should indeed take gender-related considerations into account when evaluating the business-risk profile of the investments they wish to make.

This paper is structured as follows. First, it delves into a literature-based discussion on the relationship between gender and VP firms' business risk-taking orientation and develops hypotheses on how experience moderates this effect. Second, it reports a description of the empirical setting used to test hypotheses, as well as the sources of data, method and variables. Third, results are presented. Last, contributions and opportunities for future work are identified.

2. BUSINESS RISK AND GENDER IN VENTURE PHILANTHROPY

The social psychology literature analyses human social behaviour. Social-role theory (Eagly, 1987; Bakan, 1966) stems from social psychology and analyses how gender shapes behaviour. According to these theories, individuals form gender stereotypes, which results in certain behaviours and roles being arbitrarily ascribed either to men or women (Gupta, Turban, and Wasti, 2009). Stereotypes are socialised early in life and become so embedded in individuals' minds that they think and behave according to the stereotype, without even realising they are doing so (Andreoni, et al., 2020).

Gender-role congruity theory stems from social-role theory and focuses on the social role of men and women (Eagly, 1987; Bakan, 1966). Gender social roles assume gender is socially constructed and roles take the form of descriptive and injunctive norms (Eagly and Karau, 2002). Descriptive norms are consensual expectations about what a group of people does. Such expectations may form based on stereotypical attribution of roles either to men or to women, whereby men are more likely to pursue risky behaviours in that they consume more alcohol and drugs, smoke more, drive recklessly more often, and take more intellectual risks than women (Baron, 1994; Hersch, 1996; Pacula, 1997). Injunctive norms relate to what the same group of people should do, introducing a behavioural expectation regarding what a specific group of people ought to do (Eagly and Karau, 2002).

According to injunctive norms, men are stereotypically seen as adopting an *agentic* behaviour that stems from their higher sense of ambition, courage, independence and lack of concern for social constraints (Eagly, Wood and Diekmann, 2000; Spence and Helmreich, 1978; Rokeach, 1973). Conversely, women stereotypically adopt *communal* behaviours as they are thought to be more driven by altruism, generosity, attention to the needs of others, building meaningful relationships, and concerns for social constraints and relationships (Eagly and Crowley, 1986; Eagly and Karau, 2002; Gupta, Turban and Wasti, 2009).

Gender-role congruity theory suggests that individuals are evaluated positively when gender characteristics are congruent with the social roles ascribed to the group (i.e., when descriptive and injunctive norms are congruent and individuals do what they are expected to do). This implies men adopt an agentic social role, whereas women adopt a communal one. Consistent with the congruity of gender roles stereotypically ascribed to men (i.e., agentic ones), men are more likely to work in profit-seeking endeavours, be leaders (Schein, 2001) and become entrepreneurs (Bardasi, Sabarwal and Terrell, 2011; Bird and Brush, 2002); women are stereotypically more likely to adopt communal roles. This creates a stereotype whereby women are more likely to work in the social sector, become social entrepreneurs and support social

organisations (Bacq, Hartog, and Hoogendoorn, 2016; Chen, Ni, and Tong, 2016; Conry and McDonald, 1994; Lee and Battilana, 2013; Maxfield, et al., 2010).

Injunctive norms introduce a behavioural expectation on what a specific group of people ought to do, which is typically not included in stereotypes. According to descriptive norms, men are stereotypically perceived to be more risk-seeking, whereas women are more risk-averse (Byrnes, et al., 1999). Brush and colleagues (2018) suggest that VCs are reluctant to hire women because they follow the stereotype that women are less risk-taking than men. Brooks, et al., (2019) and Charness and Gneezy (2012) indeed find that men are more risk-taking than women are when making investment decisions, despite the existence of environmental, age and employment status differences. This leads to the formulation of the following hypothesis:

Hypothesis 1: VP firms with more women in the top management team are less business risk-taking oriented.

3. THE MODERATING ROLE OF WORK EXPERIENCE ON THE BUSINESS RISK-ORIENTATION OF VP FIRMS

Gender-role congruity theory indicates that individuals are evaluated positively when gender characteristics are congruent with the social roles ascribed to the group. As such, women with previous experience working in the social sector have a congruity of gender roles; whereas women with working experience in the economic sector have an incongruity of roles as men are stereotypically seen as more likely to work in economic driven endeavours.

From the entrepreneurship literature, experience influences the business-related risks that investors undertake. Experience is defined as “*specific human capital*” (Becker, 1964) and encompasses both firm and task-specific knowledge. Specific human capital relates to “tacit knowledge” (Gibbons and Waldman, 2004; Polanyi, 1967), whereby experience is garnered in a ‘learn-by-doing’ fashion (we use the terms “specific human capital” and “experience” interchangeably). Dimov and Shepherd (2005) argue that in VC, from which VP derives, the relevant knowledge accrued as tacit knowledge held by VC investors influences the development of accurate perceptions of business risks. In particular, knowledge garnered in economic-driven endeavours should make VC investors less risk-taking oriented as it gives them cues to critically evaluate business plans and financial forecasts. At the same time, Zacharakis and Shepherd (2001) show that VC investors with more experience tend to be more risk-taking oriented, especially the longer they have been in the industry. The longer VCs have been practicing, the more likely they follow ‘gut’ decision-making processes, rather than

systematically weighing the different factors in an investment decision. This suggests that the longer the experience of the investor in an economic-driven endeavour, the more likely they will be overconfident about their abilities and the riskier investments they will make.

However, according to gender-role congruity theory, women's role is incongruent with experience in economic endeavours. Still, the early stage of development of the VP-investing space requires VP investors to gain legitimacy for VP as an investment asset class through the economic returns they generate (Lehner, Harrer, and Quast, 2019; Dagers and Nicholls, 2016). As such, VP investors need to send credible signals to stakeholders who value the economic component of the VP investing proposition. To accomplish this aim, VP investors source their investment managers from profit-oriented firms (e.g., banks, VC and private equity firms, top managers in commercial companies, and profit-driven entrepreneurs (Scarlata, Walske, and Zacharakis, 2017)). We label this "economic experience." Experience garnered in profit-seeking endeavours allows VP firms to send credible signals that they have the relevant skills and competences to master the economic element embedded in VP's investment propositions. Therefore, overconfidence and legitimacy needs, coupled with an incongruity of gender roles attributed to women who have economic experience, will likely make VP firms take on more business risk, leading to the following hypothesis:

Hypothesis 2: Teams with more women with longer tenure in economic-driven endeavours are more risk-taking oriented.

While overconfidence and a quest for field legitimacy may explain the relationship between economic experience and the business risk-taking orientation of VP firms, we know VP investors must also emphasise their investment's social mission. Their investment rationale borrows approaches and orientations typical of the non-profit sector and requires a reliance on individuals with experience in social sectors (Scarlata and Alemany, 2010; Scarlata, Walske, and Zacharakis, 2017). Experience in social-related spaces allows individuals to fully embrace the underlying social values that characterise VP investments, enhancing their understanding of how the sector improves social welfare (Chen and Bozeman, 2012; Scarlata, Zacharakis and Walske, 2016).

At the same time, the social sector tends to be less risk-taking, partly due to the financial restrictions on the use of assets; assets should be used to enhance the social mission, rather than profitability (Hull and Lio, 2006). The social sector is mainly driven by the obligation to society to implement and pursue actions that are perceived as good and relevant by its members. Due

to the intrinsic nature of the social problems addressed by VP investments, VP investors need to make extremely cautious investment decisions. In this context social experience, coupled with a congruity of gender roles attributed to women who have social experience, should lead VP managers to mitigate the risks associated with the investments they make. This leads to the formulation of the following hypothesis:

Hypothesis 3: Teams with more women with longer tenure in social-driven endeavours are less risk-taking oriented

4. METHOD

4.1 Sample

The identification of VP investors follows the approach used by Scarlata, Zacharakis, and Walske (2016). Sampling relied on the European Venture Philanthropy Association (EVPA) for European VP firms, the Asian Venture Philanthropy Association (AVPN) for Asian firms, and the National Venture Capital Association (NVCA) for US firms. Following Scarlata, Zacharakis, and Walske (2016), VP firms are those “(a) whose investments must be explicitly directed toward social enterprises, (b) provide both capital and value-added services to their investees, (c) report social return measurement to their investors [...], and (d) self-identify themselves as addressing social issues (Scarlata, Zacharakis, and Walske, 2016: 5).” One hundred and four active VP investors based in Europe, the US, Asia and Australia (60 in Europe, 23 in the US, 20 in Asia and one in Australia) are identified. Since our study encompasses four regions, it is one of the first attempts to study VP around the globe.

Data on the business risk-taking orientation of VP firms is collected through an online survey. The survey was sent to the whole population of the 104 VP firms in 2016. We obtained 50 responses (32 from Europe, 14 from the US and four from Asia), amounting to a 48.1% response rate. This response rate is in line with prior work in the VP field (cf. Scarlata and Alemany, 2010; Scarlata, Zacharakis, and Walske, 2016).

Top managers are “directors,” “C-level” executives (e.g., Chief Executive Officer, Chief Operating Officer, Chief Information Officer, etc.) and second-tier executives (e.g., Senior Vice President, Executive Vice President, etc.) (Evert et al., 2018; Young, Charns and Shortell, 2001), including only those top managers who have investment decision-making power. Three hundred and eighty-eight top managers were identified in the 104 VP firms in the population (average of 3.7 top managers/VP firm). Of these, 183 are in the 50 VP firms that responded to the survey (also an average of 3.7 top managers/VP firm).

Table 1 reports descriptive statistics for respondents and non-respondents. On average, respondent VP firms were founded in 2004, whereas non-respondent ones were created in 2005. Both respondents and non-respondents tend to be independent (i.e., founded by individuals as opposed to corporations). Responding VP firms have a mean of 3.66 top managers and 1.08 founders vs. 3.89 and 1.15, respectively, for non-respondents.

Insert Table 1 here

To assess whether non-response bias affects the generalisability of our results, several tests using the variables available for both respondents and non-respondents were run. Available variables are: country, year of creation, whether independent or part of a larger organisation, number of managers, and number of founders. T-tests on all the variables are insignificant, suggesting that respondents do not significantly differ from non-respondents. To check the robustness of these results (and assuming that non-respondents tend to be consistent with late respondents (Oppenheim, 1992)), the respondent sample was split between early and late respondents. Late respondents are those who responded to the survey after the first reminder, as suggested by Oppenheim and done by prior work in VP (Scarlata et al., 2016). A marginally significant difference (0.10 level) between early and late respondents was found for year of creation: late respondents tend to be older VP firms. However, no significant differences exist between early and late respondents in terms of country, number of managers, whether they are independent, and number of portfolio organisations. This suggests that non-response bias should not be a concern.

To identify prior work experience (at the time of the survey), first the name, position and individual biography of top managers were identified by consulting the VP firm's website. Second, to gather the most complete set of biographical information related to each top manager's individual experiences, biographical information gathered through the VP firm's website was integrated with what individuals reported on LinkedIn, ZoomInfo and Bloomberg Businessweek. Since the unit of analysis is the top management team rather than the individual top manager, individual-level values were aggregated, as done in prior work by Scarlata, Zacharakis and Walske (2016); Carpenter, Pollock, and Leary (2003); and Walske and Zacharakis (2009).

4.2 Measures

Dependent variable. Business risk-taking orientation was measured using Covin and Slevin (1989, 1986). This measure was adapted to the VP-investing space by first interviewing a sample of VP investors in Europe and the US. This led to an initial formulation of the survey, which was then piloted with a selected sample of VP investors at a major VP investor gathering. This helped in redefining the questions according to the terminology and peculiarities of this social-investing space.

The business risk-taking orientation construct used here is a reflective indicator of six measurable items related to the extent to which the VP investor embraces risk-taking behaviour, as per the items that follow: a) searches for new investment opportunities and makes bold decisions, despite uncertain outcomes; b) holds portfolio of social enterprises that continuously develop new products and services for their customers/beneficiaries; c) holds portfolio of social enterprises that have experienced dramatic changes in their service/product lines since the VP firm's investment; d) holds portfolio of social enterprises that introduce new products/services, operating technologies, etc. that benefit recipients/customers more than competitors; e) makes cautious investment decisions that focus on stability and steady growth; f) funds stable and mature social enterprises.

Data on each of these business risk-taking orientation items was collected through the survey. Respondents were asked to use a 7-point Likert scale, with 1 = Strongly disagree and 7 = Strongly agree to rate the items. Although this measure is a perceived measure of business risk-taking orientation collected at the individual level, the entrepreneurship literature indicates it can indeed be used to measure firm-level orientation (Covin and Wales, 2012; Donbesuur, Boso, and Hultman, 2020). A set of independent scores was used, which collectively form a business risk-taking orientation for each VP firm, as done by Covin and Lumpkin (2011) and Covin and Wales (2012).

Independent and moderator variables. Experience is disaggregated into economic and social experience (Scarlata, Zacharakis, and Walske, 2016). Economic experience in VP aggregates as follows: prior work in VC; as entrepreneur; in the financial sector; as senior manager in a for-profit company; in consulting. Social experience in VP includes managing a non-profit organisation or a social enterprise; positions within government, governmental agencies and developmental organisations; and founding of a non-profit organisation or a social enterprise. We measure experience as tenure (i.e., in number of years).

Gender is a count variable. In the sample, out of the 183 top managers working for 50 VP firms, we count 113 men (61.7%) and 70 women (38.3%). This contrasts with the dominance of men in VC, where they represent 94% of top managers (Gompers and Calder-Wang, 2017). Gender is a dummy variable where men = 0 and women = 1, and then aggregated to get a firm-level gender-count variable.

Control variables. First, investors can diversify the idiosyncratic business risk of each investment in their portfolios by increasing the total number of investments they make (Markowitz, 1952). Firm size, measured as the number of social enterprises in the VP portfolio at the time of the survey, is used as a control. Second, estimates are controlled for heterogeneity of human capital and gender diversity through the Blau index. Third, estimates are controlled for the perceived fulfilment of ethical obligations. This was measured using the scale developed by Stevens, Moray and Brunel (2015). Hypotheses are tested using OLS regression, correcting estimates with robust standard errors.

Robustness checks. Potential endogeneity problems that could inflate OLS results are taken into account as a robustness check. Other variables, not included in the OLS model, could influence the experience variables, making them endogenous. In such cases, the error term from OLS correlates with the independent variables and makes OLS results subject to Type I error and, therefore, biased (Anderson, 2017; Semadeni, Withers and Certo, 2013; Wooldridge, 2002). Other potential forms of endogeneity are a) measurement errors, b) autocorrelation (in the case of panel data), c) simultaneity between the dependent and independent variables. To detect endogeneity in our experience variables, we ran the Durbin-Wu-Hausman test on economic and social experience. Results from the test indicate a lack of endogeneity in the estimates.

Despite this result, further endogeneity checks are implemented. After running the Frank (2000) test, for economic experience to be endogenous, an omitted variable would have to be correlated at 0.480 with the outcome (i.e., business risk-taking orientation) and at 0.480 with the predictor (economic experience), conditional on observed covariates, to invalidate an inference. The impact of an omitted variable (as defined in Frank, 2000) must be $0.480 \times 0.480 = 0.2303$ to invalidate an inference. For social experience, an omitted variable would have to be correlated at 0.390 with business risk-taking orientation and at 0.390 with social experience, conditional on observed covariates, to sustain an inference. The impact of an omitted variable (as defined in Frank, 2000) must be $0.390 \times 0.390 = 0.1522$ to sustain an inference for social experience. Both 0.2303 and 0.1522 are well below the 0.4 endogeneity threshold that would bias OLS results (Frank, 2000).

Second, the Semadeni et al. (2013) approach was used. This relies on an instrumental variable regression whereby instruments model continuous endogenous independent variables. The instrumental variable z must be uncorrelated with the error term but must correlate with the endogenous regressor. A two-stage model is considered to implement the instrumental variable regression. In the first stage, the instrumental variable z is used to predict the endogenous independent variable x . In the second stage, the predicted values obtained in the first stage are to be used as the independent variable. This approach allows the ‘partialing out’ of any common variance between the endogenous regressor and the instrument as the predicted values do not share variance with the error term. Commercial and social experience are instrumented using the number of top managers in each of the VP firms in the sample. For economic experience, the Cragg-Donald Wald F statistic’s value (reported in Table 3 and 4 under model 5, 2SLS), is 18.413, whereas the Kleibergen-Paap rk Wald F statistic is 7.728 (reported in Table 3 and 4 under model 5, 2SLS). In the case of social experience, the Cragg-Donald Wald F statistic for social experience amounts to 0.039, whereas the Kleibergen-Paap rk Wald F statistic amounts to 0.048. The Stock-Yogo critical values range between 16.38 and 5.53. This implies that “number of top managers” is a strong instrument for economic experience, but a weak one for social experience. However, instrumental variable regressions results are presented as a further robustness check to the Durbin-Wu-Hausman test result, which shows economic and social experience are not endogenous. Even if “number of top managers” is a weak instrument, estimates give us further confidence of the main OLS results.

Third, although Wooldridge (2002) states that the interaction between an endogenous regressor and an exogenous moderator variable is not endogenous, we still perform a three-stage least squares regression as if the interaction was indeed endogenous. As in the previous case, we want to make sure that even if endogeneity in the interaction term was a problem, estimates are not biased.

Last, model specification errors were considered in the form of estimation errors due to omitted variables. These were tested using the Ramsey (1969) test. Results from the test identify a non-significant F statistics’ value, which suggests that the null hypothesis of the model being correctly specified cannot be rejected.

5. RESULTS

Table 2 reports descriptive statistics and correlation coefficients for the dependent, independent, moderating and control variables. On average, respondent VP firms tend to score high on their business risk-taking orientation, which amounts to an average of 12, suggesting VP firms are high-risk investment firms. Respondent VP firms' top management teams have 3.7 individuals on average; of these, 2.7 are managers other than CEO/founders. The average top management team has 19.4 years of economic experience and 10.7 years of social experience, suggesting VP firms' top managers tend to have higher economic than social experience. Women have, on average, more social experience than men (5.0 years for women vs. 3.4 years for men); this difference is marginally significant, at 0.1 level. Furthermore, VP firms have an average of 1.9 men as top managers vs. 1.7 women. This makes VP more gender-balanced than VC, where men managers total 94% (Calder-Wang and Gompers, 2017). Of these, 70 women are CEO or founder of the VP firm vs. 113 men. However, we find a difference between gender and being the VP firm's CEO.

Insert Table 2 here

Table 3 shows regression results (corrected for robust standard errors). Model 1 includes control variables; Model 2 includes the direct effects of gender on business risk-taking orientation; Model 3 includes the direct effects of gender, economic experience and social experience on business risk-taking orientation; Model 4 is the full model and includes the interaction term of gender, economic experience and social experience on business risk-taking. Model 4 reports OLS, 2SLS and 3SLS estimates.

Insert Table 3 here

Hypothesis 1 states that VP firms with more women in the top management team have a lower business risk-taking orientation. Model 2 tests this and shows a significant effect of gender on the VP firm's business risk-taking orientation ($\beta = 1.073$, $p < .01$). However, the directionality of the coefficient is opposite to that predicted. Therefore, having more women in the VP firms' top management firm makes the VP firm more business risk-taking oriented. This rejects Hypothesis 1.

Hypothesis 2 argues that having women with more economic experience makes the VP firm more business risk-taking oriented. On the other hand, hypothesis 3 states that having more

women with more social experience makes the VP firm less business risk-taking oriented. Based on Model 4, we find a non-significant moderating effect of both economic and social experience on gender and business risk-taking. As such, neither economic nor social experience moderate the effect of gender on business risk-taking. On the contrary: only gender stays significant and positive ($\beta = 1.499$, $p < .01$). Overall, these results reject Hypothesis 2 and 3.

Endogeneity results: Table 3 reports results from two-least-squares and three-least squares instrumental regressions under 2SLS and 3SLS respectively. 2SLS and 3SLS results are consistent with OLS estimates. Main results are robust to potential endogeneity concerns, including potentially omitted variables.

6. DISCUSSION

VP firms implement the VC investment model to back high-risk, high-growth, high economic and social impact social enterprises with the intentional aim of generating a social and an economic return. This particular investment strategy makes VP a sub-segment of impact-investing firms. Academic research in VP is still in its very early stages; much of the work has focused on assessing whether VP delivers what it promises (Di Lorenzo and Scarlata, 2019; Hehenberger and Harling, 2018; Scarlata, Walske, and Zacharakis, 2016) and overlooks the risks associated with achieving those returns. This paper is one of the first attempts to analyse the business-risk determinants in VP. Although risk in VP may be business- and social-related, consistent with the VP firm's dual investment objectives, this paper purposefully focuses on business risks. VP firms must implement business-oriented investing practices (those from the VC investment model) to be able to spur their economic sustainability (Scarlata, Alemany, and Zacharakis, 2012). At the same time, the social enterprises that VPs back are entrepreneurially oriented in that they are intended to develop market-based solutions to social problems. Consequently, both VP investors and investees are very much subject to business risk (Bacq and Lumpkin, 2019; Luke and Chu, 2013). Last, VP firms are in the process of building a market for social finance and may be inclined to make riskier investments in hope of higher economic returns through which to gain legitimacy as an investing asset class (Daggers and Nicholls, 2016).

To analyse the business-risk determinants in VP, this paper focuses on gender and experience. Drawing on gender-role congruity theory (Bakan, 1966; Eagly, 1987), it argues that when VP firms' teams have a higher proportion of women, the VP firm's business risk-taking orientation should be lower, leading to hypothesis 1. This is due to the stereotypical gender role attributed to women, whereby women tend to be risk-averse (Brooks, Sangiorgi, and Hillenbrand, 2019;

Brush, et al., 2018; Brynes, et al., 1999; Charness and Gneezy, 2012). Integrating gender-role congruity theory with human-capital theory (Becker, 1964), this paper hypothesises that when women have experience in endeavours stereotypically considered congruent (incongruent) with their gender, they will undertake lower (higher) business risks, whereby teams with more women and more social (economic) experience will undertake lower (higher) business risks (hypotheses 2 and 3).

Results suggest that only gender influences business risk-taking in VP, whereas experience does not have a role. However, the gender effect goes in the opposite direction to that which gender-role congruity theory would predict. In other words, VP firms with a higher proportion of women at the top are more risk-seeking; whereas teams with more men are less risk-seeking.

Implications for theory

This surprising result suggests the existence of a gender-bind dilemma in the VP sector (Bateson, Jackson, Haley, et al., 1963). Stereotypes are socially constructed based on gender and create pre-conceived expectations regarding how men and women should behave (Eagly and Karau, 2002). When individuals are in a space characterised by different, competing demands (such as VP), they may not act as the gender stereotype predicts. In such contexts, individuals are trapped in the competing expectations dictated by the stereotype and purposefully decide to go against it. VP firms value the economic and social implications of investing which generates a strong incongruity with respect to the stereotypical gendered role attributed to women. Our results suggest the existence of a gender double-bind effect whereby women in VP may feel trapped into the stereotype that they are more risk-averse (Bateson, Jackson, Haley, et al., 1963). VP is more gender-balanced than VC; hence, women in VP feel more empowered and less constrained by societal roles as they see and network with more women practitioners. Also, in environments with high risks and economic focus, women are not less risk-averse than men (Adams and Raganathan, 2017; Adams and Funk, 2012).

Other streams of literature show that women are risk-takers and that context does matter. The psychology literature shows that when individuals are given options that involve gains (positive framing), most people are risk-averse and when they involve losses (negative framing) they are willing to take the risk (Tversky and Kahneman, 1981). Additionally, when there is negative framing, there are no gender differences in risk taking behaviour. Still, Wilson and Daly (1985) show that men are more willing to take risk in situations where there is great competition and a large spread of rewards, further emphasizing the importance of context. The same authors found

out that people do take more risks when they believe they are going to be successful and when success is important in that specific context. Therefore, gender differences are explained by the specific context, and women are more willing to take risks in situations that matter to them (Filippin and Crosetto, 2016). In VP, investors are stewards more than in competition among them (Scarlata and Alemany, 2010).

Similar results are obtained in experimental economics. Experiments trying to assess risk-taking behaviour either use the “investment game” (Gneezy and Potters (1997), or the “lottery game” (Holt and Laury, 2002), or “bomb-risk elicitation task” (Crosetto and Filippin, 2013). The first two categories of experiments always have a safe option, i.e., an alternative of not losing by not taking the risk, and you only take risk if you want to win more, whereas the bomb-risk game does not have it. The studies using the investment game and the lottery game show that women are more risk-averse whereas no differences emerge in the bomb-risk elicitation game, suggesting that having a safer option makes women take less risks.

The stereotypical view that sees women as less risk takers needs to be revised. When the situation is framed into losses (people will die vs. people can be cured) and when there is no safe option (we need to do something or the outcome will be worse), women are willing to take more risks. VP investors are confronted with issues such as poverty, climate change, malnutrition, access to education and other pressing global social problems where there may not be a safe option. It is not about taking risk to gain a bigger financial reward, but about solving bigger problems to have a social impact. As such, the framing of social issues and the context (no safe option) encourage women to take more risks, no matter their previous experience. The strong sense of attachment to social causes may therefore spur women to go against the stereotype that they do not take risks.

Our paper offers a better understanding of the antecedents of organisations that pursue dual, competing objectives. It seeks to foster a deeper conversation on the role of gender and experience in shaping these VP organisations and shows that, when organisations are subject to competing demands, individuals internalise them differently from what is stereotypically expected. Individuals in VP firms may deliberately choose to manage organisational ambivalence by going against the gender-role stereotypes that could generate negative legitimisation concerns.

Future research can test this effect by using a similar risk instrument with VCs. Do VC firms demonstrate higher risk-seeking behaviours on the Covin and Slevin (1986, 1989) instrument?

Although the VC industry is predominately male, we could use the instrument on the few female VCs and test their risk-seeking behaviour.

Implications for practice

Results have implications for VP firms as they offer early insights on their business-risk determinants. This could help investors in VP firms (i.e., the equivalent of limited partners in VC firms) better understand the link between managerial attributes and risk. This could, in turn, help them make more efficient capital-allocation decisions. If they seek investments with a higher business-risk profile, they should be looking to invest in VP firms with more women, no matter what their prior work experience is.

For those social entrepreneurs looking for financing, they can also consider the composition of the management team of the impact investor that they might be approaching. For high-risk projects, they might have a better chance of getting their investment approved if the VP management team has a higher proportion of women.

Limitations and opportunities for future work

Although this work extends current knowledge of risk-taking orientation in VP, it has limitations. First, the VP sector is small. At the time of our data collection, it numbered just over 100 firms. This suggests that the population of VP firms is still small and, as a result, our sample is also small. This could well influence the non-significant results related to Hypotheses 2 and 3. Even though our sample includes over 48% of the VP population of firms, we still only have responses from 50 firms.

Second, it was not possible to directly test the mechanisms through which gender and experience affect risk, matching each member of the top management team with the investments they manage. It was also not possible to directly assess how individual heuristics, biases (Dubard Barbosa, et al., 2019; Mousavi and Gigerenzer, 2014), and overconfidence (Navis and Ozbek, 2016; Zacharakis and Shepherd, 2001) contribute to the firm risk-orientation through the double-bind effect.

Third, the risk-taking orientation measure is a self-reported perception measure for risk and only focuses on business risk. Since there are no 'objective' measures of business risk, the scale developed by Covin and Slevin (1989, 1986) was used. The development of a risk measure

(both in its business and social dimensions) is beyond the scope of this paper. Future work could develop a measure that allows for a quantitative and qualitative assessment of the business and social risk-taking profile of VP and the wider impact-investing sector and, more broadly, of dual-objective organisations.

Fourth, individuals may self-select into VP. Although it is not possible to rule this out, there is a current lack of systematic data to test if selection bias is a concern. Future work could gather individual-level data from the broader population of men and women and test whether those women working in the VP sector are indeed more risk-taking oriented than the general population. Finally, the risk measure developed by Covin and Slevin (1989, 1986) may well be gendered in its construction (Wilson and Tagg, 2010).

Future work could build on the double-bind effect identified here and evaluate the implications that such an effect has on both economic and social return. This would shed light on whether gender incongruities prove to have positive or negative implications (Hmieleski and Sheppard, 2019). In addition, by digging more into the double-bind effect, future work could look at the compensation system used in VP investing and how this affects risk-taking. More specifically, the field needs a better understanding of the extent to which the risk taken by VP top managers is influenced by the system of incentives (both economic and social) that characterises this investing space, and whether this system of incentives allows for an efficient alignment of the interests of top managers and fund providers.

7. CONCLUSION

Despite the above limitations, the paucity of academic work on organisations that deploy capital and strategic services to social ventures makes this work one of the earliest pieces to investigate business risk-taking orientation, stimulating further research in the area. Given the increasingly important role that social entrepreneurs and social investors play when it comes to solving some of the most pressing societal problems, our work draws attention to the need for VP firms' analysis to comprehensively account for business risk and gender in dual-objective organisations.

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Table 1: Summary statistics of VP firms (population) – respondents and non-respondents

	Respondents					Non-respondents				
	N	Mean	SD	Min	Max	N	Mean	SD	Min	Max
Country	50	.8	.571	0	2	54	.852	.684	0	2
Year of creation	50	2004	6.370	1981	2014	53	2005	6.185	1988	2016
Independent	50	.34	.478	0	1	54	.278	.452	0	1
Number of top managers	50	3.66	2.662	1	16	53	3.887	3.268	1	20
Number of CEO/founders	50	1.2	.452	1	3	54	1.148	.939	0	4

Table 2: Descriptive statistics and correlations

	N	Mean	SD	1	2	3	4	5	6	7	8	9
<i>Dependent variable</i>												
1 Risk-taking orientation	50	12	.886	1								
<i>Independent variables</i>												
2 Econ exp	50	19.42	34.13	.32*	1							
3 Social exp	50	10.69	19.02	.22	.62**	1						
<i>Moderator</i>												
4 N women	50	1.74	1.82	.38*	.67**	.32*	1					
<i>Controls</i>												
5 N managers	50	3.66	2.66	.31*	.82**	.71**	.79**	1				
6 Gender diversity	50	.26	.113	.15	.177	.311*	-.01	.15	1			
7 Experience heterogeneity	50	.28	.23	.18	.29*	.35*	.36*	.40*	.16	1		
8 Perceived ethical responsibilities	50	2.38	.67	-.14	-.23	-.04	-.07	-.09	.11	-.22	1	
9 N SEs	50	56.38	140.68	-.16	.12	.19	.01	.144	.17	.02	-.00	1

** p<0.01, * p<0.05

Table 3: Regression results – Business risk-taking orientation, experience and gender

	Model 1	Model 2	Model 3	Model 4		
		OLS	OLS	OLS	2SLS	3 SLS
Gender		1.073*** (.241)	.862* (.412)	1.499** (.733)	.507 (1.271)	1.743* (.985)
Econ experience			.004 (.026)	.046 (.044)	-.106 (.159)	-.131 (.191)
Soc experience			.040 (.039)	.130 (.083)	.081 (.095)	.125 (.255)
Gender X Econ exp				-.004 (.007)	.015 (.021)	.022 (.059)
Gender X Soc exp				-.028 (.020)	-.009 (.028)	-.030 (.107)
Gender diversity	3.503 (3.078)	.842 (3.122)	-.454 (3.491)	-2.276 (4.361)	.717 (5.279)	-2.828 (3.936)
Experience heterogeneity	6.009 (5.124)		2.451 (5.670)	-.605 (6.548)	3.531 (6.634)	1.162 (6.811)
Perceived ethical responsibilities	-.988 (.924)	-.917 (.886)	-.707 (.954)	-1.395* (.819)	-1.338 (.922)	-.690 (1.465)
N portfolio social enterprises	-.006 (.005)	-.006 (.004)	-.007* (.003)	-.006* (.003)	-.008* (.004)	-.008 (.005)
Constant	12.166*** (3.141)	12.452*** (2.253)	11.290*** 3.180	11.990*** (2.932)	14.554** (4.836)	13.278 (3.352)
<i>N</i>	50	50	50	50	50	50
<i>R</i> ²	.093	.19	.220	.257	-	-
<i>F</i>	1.80	7.38***	3.75**	5.08***	3.00**	-
<i>Kleibergen- Paap rk LM statistic</i>	-	-	-	-	5.072*	-
<i>Cragg-Donald Wald F statistic</i>	-	-	-	-	3.169	-
<i>Kleibergen- Paap rk Wald F statistic</i>	-	-	-	-	4.550	-
<i>Hansen J statistic</i>	-	-	-	-	0.000	-

*** p<0.01, ** p<0.05, * p<0.1