



Teams in New Ventures: Gender, Human Capital and Motivation

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Abstract

Purpose- This paper dismantles the idea that sex per se explains entrepreneurial outcomes and demonstrates the influence of a gendered motivation on forging and shaping new venture teams, which is a disruptive choice affecting the future of start-ups.

Methods- A two-level research model is validated on data from the PSED II, with a system of simultaneous equations. Firstly, we test if team features affect the performance of new ventures; then, we investigate determinants of team features with a focus on sex and motivation of nascent entrepreneurs.

Findings- Human capital (HC) in terms of education and experience of team members consistently explains venture evolution only when considering the larger team of affiliates. The HC gathered by nascent entrepreneurs is not due to the simplistic sex condition, but rather to a gendered motivation related to the inferior need of achievement of women.

Research limitations- Limitations of discretionary scoring assigned to items of the PSED II survey are present, but unavoidable when processing qualitative data.

Social and Practical implications- Women need to be (culturally) educated on how to re-balance their personal motivation towards entrepreneurship by fostering their incentives for achievement. Political and educational programs could trigger success in the creation of new businesses led by women.

Originality/value- This paper contributes to the literature on nascent entrepreneurship, focusing on the entrepreneurial teams in the initial phase of business creation, and provides the basis for further studies aimed at eradicating the stereotypes of gender roles that lead women to self-exclusion and organizational errors.

Key words: team; start-up; nascent entrepreneur; gender; motivation.

JEL Classification: L26, M13, J16

Introduction

Entrepreneurial success has been frequently related to the type of actors committed to venture and literature seems to emphasise business creation as often resulting from groups of individuals (Ben-Hafaïedh, 2017). In the words of Gartner *et al.* (1994), the “entrepreneur” is more likely to be plural, rather than singular (Gartner *et al.* 1994, p. 6).

The need for a deeper understanding of the role of entrepreneurial team is considered to be urgent, especially in terms of its contribution to the life of a business (Davidsson and Gordon, 2012; Aldrich & Kim, 2007; Zhou & Rosini, 2015; Box and Larsson Segerlind, 2018). This paper specifically studies how female nascent entrepreneurs build their start-up teams when creating new ventures and how the resulting characteristics affect successful business creation. Actually, women's attitude in entrepreneurship and business has been confirmed as a prominent issue over the years (Berglund *et al.* 2018; Hisrich and Brush, 1984; Kwapisz and Hechavarría, 2018; Scott, 2009). The initial formation process of entrepreneurial team is one of the critical factors (Prytherch *et al.* 2012). The size of the group involved, and the quality of human capital in terms of education and entrepreneurial experience of teammates are both necessary to attract resources needed to support the initial performance, which is to become a new firm (Davidsson and Gordon, 2012). Indeed, larger and more equipped teams increase likelihood of access to both tangible assets (e.g. financial capital) and intangible ones (e.g. social capital, skills of opportunity exploration/exploitation), as well as of being better able to cope with the complexity and uncertainty that new businesses face (Beckman and Burton 2008; Jin *et al.* 2017; Schjoedt and Kraus, 2009; Zhao *et al.* 2013; Vissa and Chacar 2009; Zhou and Rosini 2015; Lee, 2019). In this sense, team formation is confirmed to be a strategic choice affecting the future of nascent firms.

One of the premises of our study is the idea that being women entails not only an obvious biological sex condition, but also a wider concept of gender. In fact, sex and gender are different constructs (Ahl, 2006). Sex distinguishes between biological characteristics of men and women, whereas gender relates to a concurring frame of environment and personal motivations constructed through social, cultural and psychological means (Bullough *et al.*, 2017; de Bruin *et al.*, 2006; Brush *et al.*, 2009; Hughes and Jennings, 2012). From this perspective, motivations towards business may significantly differ between men and

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4 women (Manolova, Brush, Edelman, & Shaver, 2012) and may have an impact on the decision to set-up a
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6 new business as a team.
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8 We develop a research model based on two levels of analysis, interconnected in a logical sense and
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10 coherently validated. First, we investigate if team features affect venture outcome, in terms of transition from
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12 the start-up status into the new firm condition; or, on the contrary, to a choice of quitting the project.
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14 Actually, team building behaviour is worthy of investigation *if* the initial start-up team does matter in
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16 achieving the entrepreneurial goal. Then, by simultaneously controlling the connection with venture
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18 outcome, we explore the determinants of team features, with a specific focus on sex and motivation. For
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20 empirical validation, we use the Panel Study of Entrepreneurial Dynamics II (PSED II), in its 6-year
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22 longitudinal complete dataset, contributing with our evidence to two streams of existing literature.
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25 Firstly, regarding literature on the entrepreneurial team, our paper adds focus on the very first phase
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27 of business creation, by filling the gap of knowledge on the role of founding teams to facilitate, or brake, the
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29 transition from the (informal) idea of a nascent entrepreneur into a condition of being a firm. In fact, existent
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31 entrepreneurial team research tends to consider business results of developed firms (Ben-Hafaïedh, 2017;
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33 Box and Larsson Segerlind, 2018), or it tends to offer partial and often contradictory findings motivating the
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35 call for further exploration (Davidsson and Gordon, 2012). Moreover, this paper enlarges the perspective of
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37 entrepreneurial team research by also providing new evidence on the relevance of the larger team of
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39 affiliates, that we use instead of the restricted and more conventional definition of teammates.
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42 Secondly, we also contribute to the literature on female entrepreneurship by exploring
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44 entrepreneurial motivations as a function of sex and we advance by deepening the gender moderation effect
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46 in the process of team formation (Held et al., 2018; Davidsoon and Gordon, 2012). This paper contributes to
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48 overcome crude deductions related to sex, associated with harsh shortcuts in terms of women's attitudes
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50 towards entrepreneurial profession, even supported by (partial) empirical evidence, such as that related to the
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52 female underperformance hypothesis (Du Rietz and Henrekson 2000; Watson, 2002; Rosa *et al.*, 1996, Box
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54 and Larsson Segerlind, 2018, Gatewood, Brush, Carter, Greene, & Hart, 2009; Marlow & Patton, 2005,
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56 Klapper and Parker's, 2011, Yang and del Carmen Triana (2019), Hechavarria et al. 2019). Gender identities
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58 are developed consistently to biological sex, leading men and women to behave according to stereotypes
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60 (Hmieleski and Sheppard, 2019) that end up by underestimating feminine qualities in the process of new

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4 venture creation (Chamorro-Premuzic, 2014) and overestimating masculine ones (Ahl, 2004; Hmieleski and
5 Sheppard, 2019). Self-stereotypes lead women to experience negative effects and repress self-esteem,
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7 behaving in gender-congruent ways (see Cliff et al. 2005 for gender-stereotypic management styles, or
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9 Lucarelli and Brighetti 2015, for a self-attributed risk aversion of women not corresponding to their effective
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11 risk tolerance).
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15 Studies on the differences between male and female entrepreneurs frequently fail to capture the
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17 underlying factors, linked only indirectly to sex, such as the different expectations towards business that
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19 motivate women and men. Different motivations may lead to divergent strategic choices, which can be
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21 beneficial or detrimental to venture success. Implications of our findings are relevant because we highlight
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23 the influence of a gendered motivation on forging and shaping new venture teams, which is a disruptive
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25 choice affecting the future of the venture. These results might help develop a stronger basis for managerial
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27 and policy decisions addressed to overcome gender differences in entrepreneurship, by investing, as an
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29 example, in educational programs addressed to remove obstacles that lead women to underestimation of
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31 and/or self-exclusion from entrepreneurial professions.
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34 The paper is organized as follows. Firstly, we illustrate our conceptual premises on teams,
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36 performance and gender, with research questions and development of hypotheses. Then, we describe the
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38 dataset and methodological instruments. The results are presented followed by the discussion of our two-
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40 level conceptual design. Policy and educational implications conclude with future research plans.
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44 **Teams and new venture performance**

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46 As anticipated, the research model of the paper is based on two interconnected levels of analysis (see
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48 Figure 1): firstly, we try to understand if the team features affect venture outcome, in terms of either
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50 transition to new firm formation, or quitting the project (first research question- RQ1). The pre-startup phase
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52 is afflicted by uncertainty and obstacles (Hopp and Stephan, 2012) and we analyse if the nascent
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54 entrepreneurs, organized in a team, have a higher probability to effectively start-up a new business. After,
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56 and conditioned by this evidence, the determinants of the features of teams are explored, with a specific
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58 focus on sex and motivation (second research question- RQ2). Team features, here, are twofold: the size of
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4 the group involved, and the quality of human capital (hereinafter, Human Capital -HC) in terms of education
5 and entrepreneurial experience of teammates.
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8 < Figure 1 around here >
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10 A large proportion (around 50%) of nascent entrepreneurs works in entrepreneurial teams.
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12 Researchers have examined the relationships between entrepreneurial team characteristics and outcomes
13 (Lazar et al., 2019; Agarwal, Campbell, Franco, & Ganco, 2016), but findings may appear ambiguous. On
14 the one hand, several authors highlighted how team composition influences motivational and cognitive
15 processes, which have a significant impact on entrepreneurial performance (de Mol, Khapova, & Elfring,
16 2015; Delgado Garcia, De Quevedo Puente, & Blanco Mazagatos, 2015; Jin et al., 2017; Klotz, Hmieleski,
17 Bradley, & Busenitz, 2014; Xing et al. 2019). Some empirical evidence shows a positive effect of founding
18 team size, and the human capital of teammates on firm performance (Delmar & Shane, 2006). Box &
19 Larsson Segerlind (2018), in particular, confirm that firms with an entrepreneurial founding team had a
20 significantly increased survival probability, also because a team can provide faster access to resources due to
21 the larger network (Menzies et al., 2006). Entrepreneurs learn about and gather useful information on the
22 environment also from other individuals committed to their venture, tapping into their experience and
23 through them into their social network (Jack *et al.*, 2008). Firms started by teams enjoy considerably greater
24 success in overcoming some of the obstacles linked to mobilization of tangible and intangible resources
25 (Cooper *et al.*, 1994; Carter *et al.*, 2004; Beckman and Burton, 2008). Moreover, prior founding team
26 experience should help a new venture to overcome liabilities of newness (Delmar and Shane, 2006).
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44 On the other hand, the entrepreneurial team can create organization and coordination problems
45 (Parker and Belghitar, 2006) or may not have any effect (van Gelderen, Thurik and Bosma, 2006) or can be a
46 source of conflict and uncertainty which may lead to the dissolution of the venture (Khan et al., 2014).
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50 Moving towards specific team features, the quantitative side in our study is its size, i.e., the number
51 of members. Research on the relationship between entrepreneurial team size and the performance of new
52 ventures is not just hearsay: some authors suggest a positive relationship between large teams and
53 performance (Hmieleski and Ensley, 2007), due to the fact that larger teams can guarantee more access to
54 information and resources and it is associated with higher firm growth (Feaser and Willard, 2006; Colombo
55 and Grilli, 2005; Haleblian and Finkelstein, 1993). Venture capitalists and banks are more likely to provide
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4 support for teams of entrepreneurs (Beckman et al., 2007). Moreover, team size increases the impact of
5 specialization and, in turn, the performance (Sine et al. 2006).
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8 Individuals in teams collaborate more as team size increases (Mao et al. 2016), and when the size is
9 an inevitable passage that induces diversity of the team, or leads to its heterogeneity (Cui & Meng, 2019),
10 size can represent a trigger for business performance (Bass, 2019).
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13 However, the literature is not unequivocal on the role of team size for firm performance. Many
14 studies on team processes show that large teams are more likely to have disagreements on firm strategy with
15 higher coordination costs for resolving these disagreements. Large teams require greater monitoring and
16 coordination to maintain productivity (Liang et al., 2008). Large teams may experience conflicts and become
17 ineffective (Chowdhury, 2005). This results in an inverted U-shaped relationship between effort and team-
18 size (Backes-Gellner et al., 2004).
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27 All things considered, based on the majority (but not unanimous) of evidence, we present the first
28 hypothesis of the paper in response to the first research question:
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31 *H_{p.1}: The larger the size of the team, the higher the probability of a positive evolution into a new firm,*
32 *and the lower the probability of a negative evolution into disbandment.*
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35 The qualitative feature of the team here is the underlying human capital given by members of the team itself,
36 with their expected ability to gauge the environment and capture critical resources. The specific individual
37 education, skills and experience that each actor brings to the venture constitute the HC embedded in the team
38 (Unger et al., 2011; Jin et al., 2016). Members of the team with a high level of education can have a better
39 capability of managing the business and are more able to take important decisions compared to those who
40 know nothing of business and economy.
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48 Davis et al. (2009) report that the unique contributions provided by team members is a good predictor of
49 subsequent start-up outcomes; others find significant influence in terms of team background and experience
50 (Larson and Starr 1993; Beckman and Burton, 2008). Prior industry experience provides entrepreneurial
51 teams with knowledge of markets, suppliers, and industry conditions and this holds a significant relationship
52 with new venture success (Delmar & Shane, 2003). Klotz et al. (2014), in their review of literature on
53 venture team, show that teams with members that share the same prior experience make quick and unified
54 decisions and this creates an advantage for the start-up in a turbulent industry context (Baum & Wally, 2003;
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Kor, 2003) or can be positively related to the strategic choice of market entry (Fern, Cardinal, & O'Neill, 2012).

Here, we present the second hypothesis:

Hp.2: The stronger the HC underlying the team, the higher the probability of a positive evolution into a new firm, and the lower the probability of a negative evolution into disbandment.

How do women behave in forging their start-up teams?

The second level of analysis is the investigation of whether the sex of nascent entrepreneurs, and/or associated factors, such as business motivation, influence the features of teams being forged by them (second research question-RQ2, see Figure 1). Recent papers try to assess the role of gender in composition of founding teams. However, existing studies do not really provide evidence on the process through which gender impacts on team formation and new venture performance (Ben-Hafaïedh, 2017). Box & Larsson Segerlind (2018) show that the analysis of the effect of different gender compositions leads to mixed results: the hypothesis of a lower survival probability for all-female teams only receives weak support, while the authors find the strongest negative effect only for female solo start-ups.

Weakness of expectations related to sex per se has been shown, among others, by Cesarini *et al.* (2010) and by Cesarini *et al.* (2009), who use identical twins as a proxy of genetic similarity to partition risk-behaviour variance and covariance into genetic and environmental sources. They find that genetic differences can explain about 20% of individual variations in risk preference. Conversely, 80% of the variation in individual economic and financial decisions are found to be due to other non-genetic (hence, non-sex based) factors. Limited relevance of the biological condition of sex, especially in economic and financial decisional domains, leads to the third hypothesis of our analysis:

Hp.3: Sex, as a purely biological condition, does not significantly affect start up team features.

We intentionally (and provocatively) propose Hp3 in contrast to empirical evidence on lower participation of women in the entrepreneurial profession, or their weak business success (Rosa et al., 1996; Du Rietz and Henrekson, 2000). Evidence from the last Global Entrepreneurship Monitor report (Bosma, Kelley D., 2019) shows that, globally, there are seven women entrepreneurs for every ten men entrepreneurs, and highlights that Europe and North America have many economies with a strong lack of gender equality in

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4 terms of Total early-stage Entrepreneurial Activity (TEA) Rates (Number of nascent entrepreneurs/adult
5 population). One potential reason for the underrepresentation of women among entrepreneurs could be the
6 fact that women might be less likely to act on their entrepreneurial intentions (Steinmetz et al. 2013). Among
7 others, Krueger et al. (2000) argue that entrepreneurial activities can be predicted more precisely by
8 analysing intentions rather than personal characteristics due to the fact that intentions predict start-up
9 behaviours. Studying the impact of intention on action is important in the context of women entrepreneurship
10 due to the fact that the intention–behaviour link is moderated by sex (Shinnar et al., 2018, Haus et al. 2013).
11 Generally, woman have strong entrepreneurial intention in industries considered feminine (Gupta et al.,
12 2009; Kelley et al., 2017) or women can have the same intention as men but less propensity to carry out this
13 intention (Henry et al. 2016).
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25 Literature suggests that the personal motivation to entrepreneurship is a dominant drive due to the
26 link between intention and action (Bird & Schjoedt, 2009), as motivation guides a person to adopt certain
27 behaviour in view of a specific goal (Aldrich & Martinez, 2001; Carsrud & Brännback, 2011; Fayolle &
28 Linan, 2014). Motivation regarding business may significantly differ, in particular, between men and women
29 (Maes et al. 2014; Manolova et al., 2012). Indeed, gender differences are more likely in the preference stage
30 (intentions) than in the action stage (entrepreneurial activity), as reported in Verheul and Thurik (2001).
31 Hughes (2006) categorises women’s start-up motivations into classic motivations (financial opportunity,
32 challenging work, independence), forced motivations, such as unemployment, job loss or lack of work
33 opportunities, and work-family motivations, such as the need to balance family and work, and to have a more
34 flexible work-schedule. Women exhibit more family-related motivations than men, particularly when they
35 have children (DeMartino et al., 2006).
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49 In the same vein, Maes et al., (2014) suggest that men are more concerned with achievement attributes
50 (income, challenge, etc.) while women are more prone to balance attributes related to getting organized
51 (autonomy, work-life balance). Considering the gender aspect of motivation towards entrepreneurship, we
52 propose the fourth, and conclusive, hypothesis of the paper:
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57 *HP4: Motivations significantly affect start up team features.*

58 59 **Methods**

60 *The dataset*

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4 The Panel Study of Entrepreneurial Dynamics (PSED II) offers data for the empirical analysis. PSED II
5 contains information on 1,214 nascent entrepreneurs¹ and this initial pool was longitudinally followed
6 through their venture progression for 5 years since the initial questionnaire (initial Wave A and following
7 Waves B, C, D, E, F); the original number of entrepreneurs drops in the subsequent waves due to non-
8 response (Gartner and Shaver, 2012).
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11 PSED II identifies three groups of actors participating in the start-up team: i) owners, that is, people
12 or other businesses sharing ownership of the new venture; ii) key-not-owners, that is, people or other
13 businesses making a distinctive contribution to the founding of the new venture (without sharing ownership);
14 iii) helpers², that is, people or other businesses providing regular support to the new business (without
15 sharing ownership). Data on teams and their evolution over time come from the respondents, considered as
16 the nascent entrepreneurs and excluded from team measures. Coherently, 'solo' entrepreneurs have been
17 excluded (according to Brannon *et al.*, 2013), leaving 663 respondents relying on teams, i.e. nascent
18 entrepreneurs with at least one co-owner/key not owner/helper.
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21 For the assessment of the start-up outcome, PSED II asks respondents to categorize the status of their
22 new venture in each follow-up wave, according to criteria outlined in Reynolds and Curtin (2008): new firm,
23 if the firm is up and running; start-up, if the new venture is still in the start-up process; quit, if the respondent
24 self-identifies as disengaging from the process.³ Summary statistics of the performance of these ventures,
25 across years, are reported in Table 1, distinguishing male and female nascent entrepreneurs.
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45 In the initial sample of 663 ventures, women are 264 corresponding to 39.6 per cent of the total,
46 supporting the knowledge of the inferior participation of women in new venture creation; the percentage of
47 women quitting ventures is much higher (from 46.6 per cent in time 2 to 40.8 per cent in time 4) than the
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54 ¹ Operationally, nascent entrepreneurs (1) consider themselves as starting a business, (2) have engaged in start-up
55 activities within the past year, (3) expect to own all or part of the new business, and (4) have not experienced more than
56 three months positive cash flow (Reynolds *et al.*, 2004).

57 ² Differences between helpers and key not owner are not great. "*Key not owners are more involved than helpers, due to*
58 *the fact that they are more likely to have personally accepted responsibility for critical component of the start-up*
59 *process than helpers and are more likely to expect to participate in day-to-day operations than helpers and are more*
60 *likely to be employees or exclusive subcontractors*" (Burton, Anderson and Aldrich, 2009, pp. 122).

³ Note that in the PSED II design, entrepreneurial exit is characterized as the process by which firm founders leave the
new venture they created, and not as the entrepreneurial exit of the business from the marketplace.

percentage of those who have led their venture into a new firm (from 34.7 per cent in time 2 to 32.2 per cent in time 4, see Table 1).

Definition of team and criteria for calculations

The literature contains numerous differing definitions of entrepreneurial teams (Schjoedt and Kraus, 2009). Typically, literature adopts a restrictive definition of ET, as the group of founders, who frequently share the ownership of the new venture (teammates).

In this paper, consistently with Gartner *et al.* (1994), Klotz *et al.* (2014) and Schjoedt and Kraus (2009), we innovate by introducing also a more extensive definition of a start-up team, which includes various supporters of the owners (called affiliates), such as organizational decision-makers, family members and advisors (not only owners, but also key not-owners and helpers, using PDES II categories). Affiliates may provide critical resources for successfully developing the new business, in terms of tangible resources (financial capital) and intangible resources (social capital, human capital, technical and managerial competences, skills of opportunities' exploration/exploitation).

Consider the start-up having N_{own} owners, N_{kno} key not-owners and N_{help} helpers. The size of the team is equal to N_{own} (number of owners) for the limited definition of team (teammates); for the extensive team of affiliates, it is:

$$SIZE = N_{own} + N_{kno} + N_{help} \quad (1)$$

The qualitative features of the team depend on its underlying HC, in terms of education and experience. In assigning a value to the HC variable, we follow the definition put forth in previous studies on aggregate team HC (Delmar and Shane, 2003; Dimov 2017; Unger *et al.*, 2011) complementing their approach with information from the PSED II dataset. Each actor of the team exhibits some specific characteristics, which represent the level of HC provided by the actors themselves. We define the measure HC, reasonably viewed as a proxy of the human capital provided.

The j -th generic characteristic of an owner will be denoted by O_j . Analogously, K_n and H_m are the generic characteristics of a key not-owner and a helper, respectively. Each characteristic varies within a

range of values, and each actor is associated to a specific value for each characteristic. The value of the characteristics O_j, K_h and H_m for the n -th actor will be denoted by $o_j(n), k_h(n)$ and $h_m(n)$, respectively.

In line with the assumption that the more resources are provided, the better it is for the business (Stewart, 2006), the HC of the start-up is defined as the sum of the values of all the HC characteristics of the actors of the start-up. Therefore,

$$HC = \sum_j \sum_{n=1}^{N_{own}} o_j(n)^{own} + \sum_h \sum_{n=1}^{N_{kno}} k_h(n)^{kno} + \sum_m \sum_{n=1}^{N_{help}} h_m(n)^{help} \quad (2)$$

Appendix displays the variables used to calculate SIZE (Table A.1) and HC (Table A.2), in line with the above (1) and (2) formula respectively, starting from the native source in the PSED II questionnaire; winsorization copes with response distribution. Table A.2, specifically, indicates the list of variables involved in equation (2). The rationale for selection of PSED II questions refers to their capacity to indicate the HC of affiliates, i.e. their ability to bring resources, such as information or tacit knowledge, into the new business.

Team building behaviour is necessarily dynamic as new relations may be continuously created or dissolved. For this reason, we calculate both team features (SIZE and HC) at the beginning of the process (Wave A) and then update them yearly based on new information provided by the respondents in the following 5 waves (Wave B, C, D, E, F).

Definition and calculations of motivation variables

Motivation is widely recognized by literature as one of several factors with impact on the behaviour of nascent entrepreneurs and on the development of the business creation process. Based on existing motivation theories, motivational factors can be divided into pull and push factors (Maes *et al.*, 2014; Carter *et al.*, 2003).

We opt for a data-driven classification of motivations, based on Section W: Respondents' motivation of the PSED II dataset. We use exploratory principal component analysis (PCA) to identify the underlying structure of entrepreneurial motives and determine which indicators are associated with each factor. We retain all factors with an eigenvalue greater than unity. This results in 4 factors that retain 62 percent of the

total variance in the original data. The reliability of the procedure is computed using the Kaiser-Meyer-Olkin measure of sampling adequacy that returns a value of 0.8223. We then associate each factor with those variables that have a loading that exceeds 0.40 in absolute value (see Table 2).

< Table 2 around here >

The first component is related to an underlying motivation linked to Money ('aw9: larger personal income', load of 0.5769; 'aw12: great wealth/high income', load of 0.5509; 'aw6: financial security', load of 0.4308).

The second component includes motivations related to the social environment of entrepreneurs and the role models in the family; therefore, it has been named Social recognition ('aw3: continue a family tradition', load of 0.6; the other three variables, 'aw4: respected by friends', 'aw7: follow the example of a person you admire', 'aw8: build a business for children', loads around 0.40). The third factor is related to motivations linked to striving for power, recognition, self-representation and development of own ideas; this factor has been referred to Need for achievement ('aw11: develop an idea for a product', load of 0.5433; 'aw13: power to greatly influence an organization', load of 0.4931; and 'aw10: achieve and be recognized', load of 0.4818). Finally, the fourth factor is referred to desire for freedom and independence; thus, it is namely Freedom ('aw2: flexibility for personal and family life', load of 0.6226; 'aw5: freedom to adapt your own approach', load of 0.7220).

In a further multivariate frame, the four motivational score-variables (MONEY, SOCIAL RECOGNITION, ACHIEVEMENT AND FREEDOM) are summarized in the vector \mathbf{M} .

Control variables

A first control refers to the presence of team members belonging to the same family of respondents, as this aspect could have some influence on venture performance (Chell and Baines, 1998). Thus, the FAMILY TEAM (binary) variable is added, capturing whether at least one member of the team is a relative.

The further set of variables represents standard controls (see Table 3). Indeed, as discussed in Robb and Watson (2012), gender differences may be misrepresented if demographic controls are neglected, causing gender to be merely a proxy for unobserved characteristics.

< Table 3 around here >

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4 Individual controls (IK) refer to characteristics of the entrepreneur, such as education or racial
5 background, and may reflect the extent to which the entrepreneur has had the opportunity to develop relevant
6 skills and contacts (Cooper *et al.*, 1994). This may influence the social environment of the nascent
7 entrepreneur and in turn the possibility to reach people, and gather teams, to contribute to the business
8 creation process.
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15 Business controls (BK) related to business demographics are finally added. In line with Ahl (2006),
16 controlling for industry is essential in any gender-based comparison, due to the fact that female business
17 ownership is concentrated primarily in the retail and service industries and these businesses are relatively
18 small in terms of employment and may require a different (smaller) start-up team configuration.
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25 *Analysis*

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27 The two interconnected levels of analysis have been jointly considered by estimations, within a system of
28 simultaneous equations. Precisely, the two research questions of Figure 1 have been answered by means of a
29 system of two sets of equations, where the dependent variables of the first set are then included as
30 independent variables in the second set. Specifically, team features (SIZE and HC) are variables tested to
31 predict venture performance that can be either NEW FIRM (NF) in models I, or venture abandonment
32 (QUIT) in models II. Moreover, team features become dependent variables in models A (for SIZE) and B
33 (for HC). Business controls (BK) and Year controls (YK) are introduced in all the equations. In the second
34 level of analysis (i.e., models A and B), besides controlling for the presence of any familiar component in the
35 team (FT), Individual control (IK) is added. Moreover, models A and B alternatively consider only the
36 variable “women” to indicate the sex of the respondents (models A.1 and B.1) or in addition the vector **M**
37 indicating motivation and resulting from the preceding principal component analysis.
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53 **Results**

54 *Descriptive statistics*

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57 Table 3 contains descriptive statistics and bivariate gender comparison for the full set of variables of
58 the study sample. The original 663 nascent entrepreneurs holding a team in wave A are then tracked in
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subsequent years, corresponding to waves from B to F, resulting in a final dataset of 1970 individual-year observations.

With respect to the team features, on average women-led nascent ventures rely on smaller teams than men's ones, in terms of SIZE, and are under-equipped in terms of HC. This holds true when considering both teammates (mean values of SIZE 0.892⁴ and HC 1.300 for teams of the whole sample, SIZE 0.712 and HC 1.163 for teams of female nascent entrepreneurs) and affiliates (SIZE 3.582 and HC 3.636 for the whole sample, SIZE 3.400 and HC 3.392 for women), given the statistical significance of bivariate mean comparisons (always $p < 0.001$; $p < 0.05$ for SIZE of affiliates).

SIZE and HC appears strongly correlated, both in the restricted team of teammates (correlation coefficient equals 75.41) and in the wider team of affiliates (correlation coefficient equals 66.64). This is mainly due to the additive approach used in their calculation, and motivates the choice of using these variables alternatively in the first level of analysis, resulting in the split of Models .A and .B. Remaining correlations of descriptive variables are well within acceptable ranges⁵.

As far as the business is concerned, it is noticeable from Table 9 that some sectors show a statistically higher participation of women (precisely, retail store, consumer and health service, and insurance); others show an opposite situation of inferior female participation (manufacturing, construction, agriculture, mining, whole sale distribution and business consulting).

Among motivation variables, FREEDOM Factor 4 of PCA is significantly higher (1.172) for female nascent entrepreneurs than for the whole sample for which it is 0.026 ($p < 0.01$). Conversely, MONEY, SOCIAL RECOGNITION, and ACHIEVMENT are statistically lower for women: -0.083, -0.089 and -0.109, respectively for women, against 0.042 ($p < 0.05$), 0.018 ($p < 0.1$) and -0.036 ($p < 0.1$) for the whole sample.

⁴ Remember that the nascent entrepreneur has been excluded from team measures, and it is likely that over time she lost members, remaining alone.

⁵ Evidence available upon request.

Results of hypothesis testing

A system of simultaneous equations is carried out to test hypothesis; for the first level of analysis, we used probit regressions because the dependent variables are binomial (NF, in Models I and QUIT in Models II – Table 4).

< Table 4 around here >

In the second level of analysis (Table 5), determinants of SIZE (Models A) are obtained through estimations of a Poisson function, because the dependent variable is a discrete number (of teammates or affiliates); conversely, determinants of HC (Models B) derive from an Ordinary Least Square regression, as the dependent variable is a continuous measure. Determinants of team features are explored with attention to sex of the nascent entrepreneurs. Note that the WOMEN variable is used, both singularly, with the remaining controls (Models .1 of Table 5), and together with the MOTIVATION scores (Models .2 of Table 5). The overall set of models has been estimated for teammates (Panel a) and for affiliates (Panel b).

< Table 5 around here >

Figure 2 shows the comprehensive results for the two-levels research model of the paper.

< Figure 2 around here >

Team features and start-up evolutions

Table 4 indicates that team features are not predictors of venture performance when considering the limited group of owners (Panel a): neither the number of teammates, nor their qualification in terms of education and experience, are shown to significantly affect the probability that a start-up develops into a new firm, or that it is abandoned. For teammates, Hp1 is rejected (no relation in Figure 2, left chart).

Opposite results are obtained when considering the wider definition of team (Panel b), which includes also key not-owners and helpers: HC, meaning a qualified team of affiliates, significantly increases the probability that the venture develops into a new firm (coef. 0.0319, $p < 0.01$), and decreases the probability of disbandment (coef. -0.0697, $p < 0.01$). The SIZE of affiliates team holds a limited influence, only reducing the probability of quitting the venture (coef. -0.0188, $p < 0.01$). Summing up, for affiliates, Hp1 is accepted only when considering the case to disbandment; conversely, a consistent support is obtained

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4 in favour of Hp2, as HC endowments of the wide set of owners, key not-owners and helpers favour both the
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6 development of the start-up into a new firm, and reduce quits (relations in Figure 2, upper right side).
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10 *Determinants of team features*

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12 The relation between team features and venture outcomes is the foundation of the research model of
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14 this paper. Thus, absence in the first level of analysis of significant relationships for teammates imposes to
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16 disregard results of Table 5- Panel a. Results to test Hp3 and Hp4 are limited to estimates exposed in Panel b
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18 (affiliates, right side of Table 5), and coherently drawn in Figure 2, lower right side.
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21 When *excluding* the MOTIVATION scores, that is in Models .1, the WOMEN variable is significant
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23 and negative, both in specification A (dependent variable SIZE, coef. -0.1193, $p < 0.01$) and in specification B
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25 (dependent variable HC, coef. -0.3030, $p < 0.10$). Thus, the hypothesis of absence of influence of sex on
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27 shaping size and qualification of start-up teams (Hp.3) is rejected.
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30 Nevertheless, when the WOMEN variable is included together with the vector of motivations **M**,
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32 evidence for testing Hp3 is contradictory: the sex of the nascent entrepreneur continues to be significant
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34 when related to the SIZE of the team (coef. -0.0984, $p < 0.01$, specification A.2). On the contrary, its
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36 statistical significance disappears when referring to HC of the team (i.e., in the B.2 specification), in favor of
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38 the strong significance of the motivation variable ACHIEVEMENT (coef. 0.2480, $p < 0.01$). Therefore, Hp.3
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40 is accepted *when*, and *because*, Hp4 is accepted. This means that the qualification of the wide team of
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42 affiliates recruited in the venture does not depend on the sex *per se* of the nascent entrepreneur, but on her
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44 personal motivations. That is, on her desire for achievement.
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47 Marginally, three out of the four motivation scores affect the SIZE (specification A.2) of the team of
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49 affiliates: two of them with a positive sign, i.e., SOCIAL RECOGNITION (0.0445, $p < 0.01$), and
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51 ACHIEVEMENT (0.0483, $p < 0.01$); the latter, with a negative one, i.e., FREEDOM (- 0.0315, $p < 0.01$)⁶.
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56 ⁶With respect to business controls, we mention the role of the health service sector which is the only one to consistently
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58 reach a significant and beneficial role, in terms of both increasing the probability of transition to a new firm and
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60 decreasing the probability of quitting. Concerning the influence on team features, when statistically significant, all the
business sectors have a positive effect on them (restaurants, manufacturing, agriculture, insurance, real estate and
business consulting); the unique exception is for the finance sector, which is negatively related to the size of the team,
when it is simultaneously estimated with the transition to new firm.

Discussion

The analysis of factors affecting the probability that nascent entrepreneurs are successful in starting up their new business is of considerable academic and political interest (Lichtenstein et al. 2007). Answering the call of Daviddson and Gordon (2012) of deeply investigating the new business formation at team level, with this paper we focus on the moderator effect of gender on team formation during the specific pre-startup phase.

Summary statistics of PSED II data show that teams forged by female nascent entrepreneurs appear smaller and less equipped in terms of education and experience. This paper aims to overcome raw deductions related to sex, because simplified associations cause a socially constructed 'gendered behavior' that reinforces the accumulation of socially constructed stereotypes (Stedham and Wieland, 2017, Ahl, 2006). Gender stereotypes may distort women's inclination towards entrepreneurial professions, with self-exclusion and a perceived inferior entrepreneurial orientation (Fellnhofer et al. 2016). According to Hmieleski and Sheppard (2019), entrepreneurship cannot be easily reduced into traditional stereotypes, even if entrepreneurship has been considered a stereotyped activity across many cultures. This has reinforced a bias in which women are viewed as less equipped in terms of personal characteristics to have success as entrepreneurs.

In order to dismantle simplistic sex associations, the paper investigates the team building behaviour of female nascent entrepreneurs (RQ2), after proving that the forging of teams is an initial disruptive choice for new venture performance (RQ1).

Does a team affect start-up evolution?

Empirical evidence offers a puzzled response to RQ1: teams limited to owners have no effect on start-up evolution, depending neither on how many their components are, nor on how qualified they are. Regardless of the strong impact, this result confirms the outcomes shown by Arenius *et al.*, (2017), based on a comparable dataset, which included the start-up team organisation among the individual gestation activities that were shown not to be a necessary condition for firm emergence.

On the contrary, our empirical analysis shows that the wider team of affiliates influences the future development of the start-up. The numerosity of the team decreases the probability of quitting and is in favour of the positive role of size on outcome, supporting the majority, but not unanimous, of evidence of previous

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4 literature (among other, Bass, 2019). Even better, the experience and qualification of team members both
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6 increase the transition of ventures into new firms and decrease disbandment from business projects. This
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8 importance of human capital is definitively in line with previous findings in the literature (among other, Kim
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10 *et al.*, 2006; Byungku 2019; Unger *et al.*, 2011).

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13 Concise deductions are twofold: firstly, multiple owners of a start-up do not influence its future if
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15 simply represented by ‘how many’ or ‘how much they are qualified’. It is reasonable to deduce that the
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17 formal agreement to share ownership is valuable if related to ‘how much money’ owners put on the business
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19 idea. Numerosity of owners is not necessarily related to the amount of money raised (consider crowdfunding,
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21 with thousands of owners with a very small investment each); nor does the owners’ education and experience
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23 necessarily give their expected valuable contribution to the business.

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26 On the contrary, the wide group of affiliates, including key non-owners and helpers, provides
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28 inherently intangible contributions, and results show that these teams hold a strategic role for the new
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30 venture’s future. HC endowments of a large set of affiliates favour the development of the start-up into a new
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32 firm and reduce the probability of quitting. It is not surprising to find evidence that the ‘number’ of actors
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34 does not exert *per se* a positive influence on the continuation of the start-up, unless specific human capital
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36 contributions, such as higher industry and business experience or higher education, are in place. These
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38 results appear substantially in line with Levie and de Borst (2017) and Jin *et al.*, (2016), mainly when they
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40 find higher growth expectation where teammates have higher education levels, even if our findings are in
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42 favour of this relationship being supported by the wider team of affiliates.

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46 *Which are the drivers of the quantitative and qualitative features of teams?*

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49 Sex is important for influencing the size of teams, besides a list of motivations with an opposite
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51 influence: a positive one, for social recognition and achievement, and a negative one, for freedom.
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53 Nevertheless, team size uniquely affects (specifically reduces) the probability of quitting.

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56 On the contrary, sex ceases to be relevant when focusing on what is most relevant, namely enrolling
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58 highly educated and experienced team members. The provocation proposed with Hp3 can be responded. The
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60 nascent entrepreneurs, regardless of their gender, when they are motivated by a strong need for success,
demonstrate being able to assemble their affiliates with high standards of HC, as this team quality is crucial

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4 for the initial performance of the start-up, by both increasing probability of development into a viable firm,
5 and decreasing abandonments. Thus, motivations of nascent entrepreneurs have a significant and positive
6 impact on venture success (Baum and Silverman 2004; Hechavarria *et al.*, 2012; Zhao *et al.*, 2013). Results
7 are also in line with Maes *et al.*, (2014), and the concept that motivation is helpful in explaining the
8 direction, effort, and persistence of action, from the initial decision of self-employment (Segal *et al.*, 2005).
9 In line with McClelland *et al.*, (1982), results suggest that people with a high desire for achievement take on
10 a high degree of responsibility towards the result and are more likely to engage in activities that are strategic
11 for the business, increasing the chance of the venture developing into a new firm, independently of the sex of
12 the entrepreneur.
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23 Descriptive statistics clearly indicate gendered motivations: female entrepreneurs appear
24 significantly more likely than male ones to have a motivation towards the business related to freedom,
25 which means flexibility for balancing family and work, with a family-based role (Maes *et al.*, 2014;
26 DeMartino *et al.*, 2006): women are more prone to choose entrepreneurship as a means of simultaneously
27 satisfying their own career needs and those of their children/family (Clain, 2000; Kirks and Belovics, 2006).
28 Unfortunately, the desire for independence and freedom may lead (female) entrepreneurs to focus on their
29 life, and not entirely on the business, thus avoiding tough choices, such as the complexity of dealing with
30 larger group of teammates (Maes *et al.*, 2014). On the other hand, women are less motivated by money
31 (Cromie, 1987), social recognition, and - the most important motivation- achievement incentives. This paper
32 demonstrates that an inferior need of achievement affects the entrepreneurs' initial and disruptive decision of
33 gathering a qualified group of people who will drive the start-up to success. An inevitable deduction is that
34 women, more pushed by request for freedom and less by need of achievement, tend to gather smaller teams
35 and to pay less attention to the human capital that is collected with them, thus making a fatal organizational
36 choice (mistake).
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52 As a whole, the gender stereotypes that starting a business is culturally associated with masculine
53 characteristics (Ahl, 2006; Gupta *et al.*, 2009) lead to family and occupational roles for women (Brush *et al.*,
54 2009) and create a social environment where men are seen as entrepreneurs (Baron *et al.*, 2001). Moreover,
55 gender stereotypes impact on women's high-growth entrepreneurial intention (Henry *et al.*, 2013). Not
56 marginally, masculine entrepreneurial stereotypes may explain the choice of sector of activities as resulting
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4 from summary univariate statistics: high-technology industries and manufacturing sector are dominated by
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6 men, while women are concentrated in low-growth sectors such as retail store, consumer and health services.
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10 **Conclusions**

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12 The findings of this paper can be summarized in a list of what is not statistically relevant and what
13 on the contrary is statistically relevant. Firstly, the features of the restricted team of owners are not relevant
14 for the venture's evolution. This is true, instead, for the larger team of affiliates, including key not-owners
15 and helpers. Secondly, the size of the team does not affect, per se, the evolution of the start-up into a new
16 firm, but only in relation to the human capital that underlies the team. Thirdly, the mere biological condition
17 of being women (sex) is insufficient to explain the underlying human capital of team. Rather, sex seems to
18 have an impact insofar as it is indirectly associated with different motivations towards business, deeply
19 gendered. The findings of this paper demonstrate that the reason for which nascent women entrepreneurs are
20 less keen on developing solid start-up teams is not related to the mere biological condition of being a female
21 (Brush et al., 2006; Manolova et al. 2007). Rather it is a motivation towards the business that mediates the
22 relationship between sex and the recruitment of a qualified team, which is vital for the evolution of the
23 startup into a new firm. The desire for success has a significant and positive impact on the recruitment of
24 highly qualified people in terms of education and experience. Women seem to lack this desire, being driven
25 by motivations related to the role that they expect society to assign to them, such as reconciliation between
26 family and work. Unfortunately, this motivation leads females to build smaller teams, thus increasing the
27 probability of disbandment.
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46 In line with Hmieleski and Sheppard (2019), this paper offers indications for policy measures and
47 educational programmes aimed at fostering entrepreneurial inclinations among women. The idea that
48 businesses run by women have a higher failure rate than men's should be eradicated (Baycan Levent et al.
49 2003; Watson, 2002), as well as that women's prevailing task in society is a family-based role. Stereotypes
50 of gender roles leads women to self-exclusion (Stedham and Wieland 2017; Fellnhofer *et al.*, 2016) and to
51 make organizational mistakes. Women need to be taught to pursue the need for achievement and to carry on
52 business ideas with an appropriate effort in terms of a large and qualified team of supporters.
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4 Women need to be (culturally) educated on how to re-balance their personal motivation towards
5 entrepreneurship by fostering their incentives for achievement. Political and educational programs could
6 trigger success in the creation of new businesses led by women. According to Bullough *et al.* (2017), to
7 stimulate a more entrepreneurial attitude among women, it is necessary to create the environment and tools
8 for this scope. Thus, at the level of social culture, programs and courses to stimulate the birth and growth of
9 firms founded by women are essential in a political and institutional framework, as well as education on
10 gender equality and women's rights. In line with Hmieleski and Sheppard (2019), our findings emphasize the
11 need for a "more balanced perspective of entrepreneurship", focusing on specific characteristics of women
12 that can create the condition to become entrepreneurs and on factors that can have an impact on women's
13 intention to engage in entrepreneurship.

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15 We acknowledge limitations of the computation's aspect of our paper, such as the discretionary scoring
16 assigned to the HC measure, but this is unavoidable when processing data of qualitative surveys.
17 Nevertheless, publicity and width of the PSED II statistics help to overcome this concern because our
18 computations are easily verified, allowing comparisons with similar surveys in other countries.

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20 In fact, given that the results of this paper strongly rely on socially constructed motivations, the same
21 analysis may be replicated by comparing culturally different countries and leveraging on comparable
22 datasets, based on similar design protocol (so-called PSED protocol), such as the Comprehensive Australian
23 Study of Entrepreneurial Emergence (CAUSEE 2007–2013), the Swedish Panel Study of Entrepreneurial
24 Dynamics and the Norwegian PSED study.

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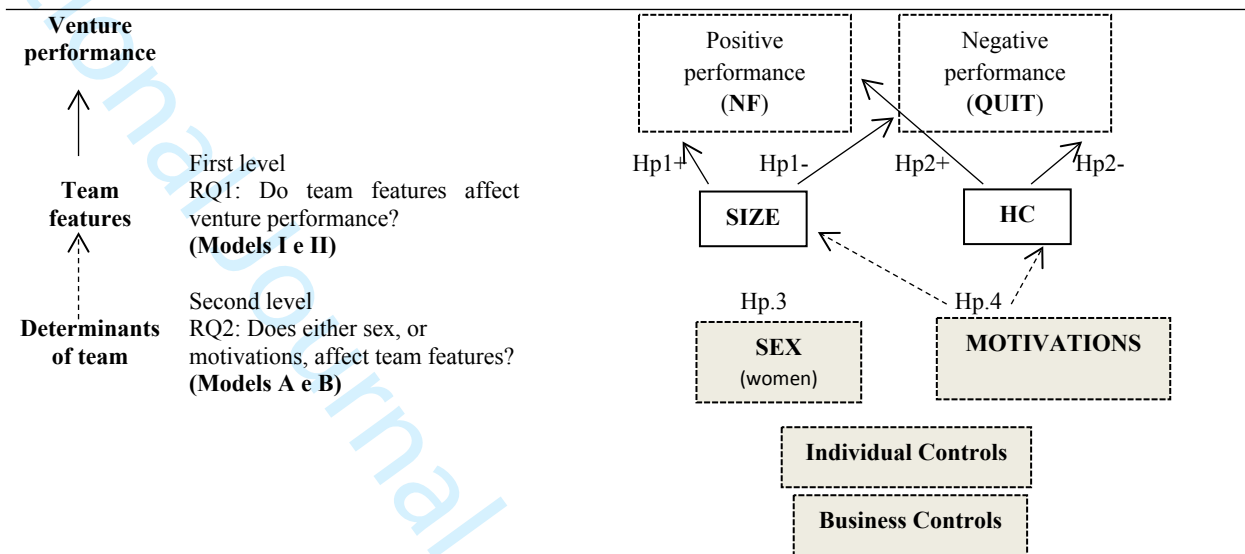
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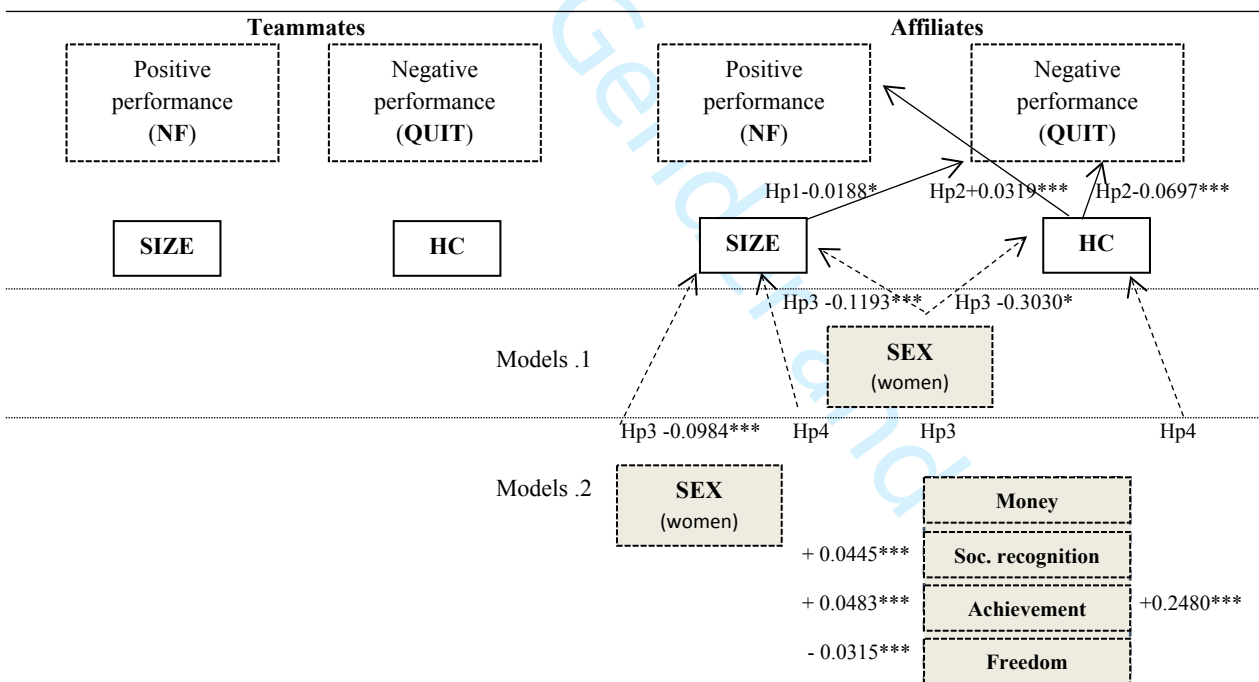
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Figure 1 Two-levels research model with expected directions and signs



Notes: HP3 entails a condition of absence of relation. No raw has been drawn.

Figure 2 Research model with results



Notes: Unstandardized coefficients β . * $p < 0.1$; ** $p < 0.05$; *** $p \leq 0.01$.
The presence of the raw for Hp3 means its rejection.

Table 1 Venture's performance across years

Time (year)	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6
NF		72	90	87	95	91
(% on Total)		10.9%	19.1%	25.9%	35.8%	38.6%
women		25	29	28	35	35
(% on NF)		34.7%	32.2%	32.2%	36.8%	38.5%
QUIT		193	134	71	29	31
(% on Total)		29.1%	28.5%	21.1%	10.9%	13.1%
women		90	55	29	9	8
(% on QUIT)		46.6%	41.0%	40.8%	31.0%	25.8%
Total	663	663	470	336	265	236
women	264	264	174	119	90	81
	39.8%	66.3%	70.7%	66.9%	63.8%	71.1%

Notes: Information on venture's performance is available from the second year of the PSED (Wave/time 2). At Wave/time 1, the sample includes 663 ventures, with 264 of them belonging to women's project.

Table 2 Factor analysis on PSED II motives for starting a new business

PSED question (Section W):	Motivation			
	Money	Social Recognition	Achievement	Freedom
	Factor1	Factor2	Factor3	Factor4
aw1: higher position in society				0.6226
aw2: flexibility for personal and family life				
aw3: continue a family tradition		0.6237		
aw4: respected by friends		0.4107		
aw5: freedom to adapt your own approach				0.7220
aw6: financial security	0.4308			
aw7: follow the example of a person you admire		0.4308		
aw8: build a business for children		0.4127		
aw9: larger personal income	0.5769			
aw10: achieve and be recognized			0.4818	
aw11: develop an idea for a product			0.5433	
aw12: great wealth/high income	0.5509			
aw13: power to greatly influence an organization			0.4931	

Notes: This table indicates the loading values on motivation variables for each of the four factors identified from the principal component analysis. We retain variables where the absolute value of the loading exceeds 0.4.

Table 3 Descriptive statistics

		Whole sample					Women sample				
		Obs	Mean	Std. Dev.	Min	Max	Obs	Mean	Std. Dev.	Sign	
Restricted Team (teammates)	SIZE	1970 [^]	0.892	1.426	0	10	728 [^]	0.712	0.979	***	Total number of teammates
	HC	1970 [^]	1.300	1.702	0	10.183	728 [^]	1.163	1.611	***	Score for HC of teammates
	Family Team	2175 [^]	0.416	0.493	0	1	801 [^]	0.398	0.490		Dummy = 1 if there is any relative in the team
Wide Team (affiliates)	SIZE	1970 [^]	3.582	3.494	0	27	728 [^]	3.400	3.616	**	Total number of affiliates
	HC	1970 [^]	3.636	2.904	0	18.653	728 [^]	3.392	2.892	***	Score for HC of affiliates
	Family Team	2175 [^]	0.676	0.468	0	1	801 [^]	0.695	0.461	*	Dummy = 1 if there is any relative in the team
Correlation SIZE-HC teammates			75.41								
Correlation SIZE-HC affiliates			66.64								
Motivations	Money	655	0.042	1.531	-3.61907	3.523176	260	-0.083	1.601	**	Factor 1 score using PCA on PSED II -Sect. W
	Social Recognition	655	0.018	1.462	-2.039372	5.178822	260	-0.089	1.387	*	Factor 2
	Achievement	655	-0.036	1.317	-3.216376	3.895823	260	-0.109	1.329	*	Factor 3
	Freedom	655	0.026	1.218	-3.685922	2.185493	260	0.174	1.172	***	Factor 4
Individual controls	Education	663	0.568	0.180	0	1	264	0.562	0.161		Level of formal education of the startupper
	White	663	0.852	0.355	0	1	264	0.845	0.363		Dummy = 1 if the start-upper is white
	Black	663	0.100	0.300	0	1	264	0.129	0.336	**	Dummy = 1 if the start-upper is black
	Indian	663	0.054	0.227	0	1	264	0.045	0.209		Dummy = 1 if the start-upper is indian
		Freq.	%			Freq.	%				
Business controls	retail store	84	12.67			47	17.8	***			
	restaurant	24	3.62			8	3.03				
	consumer service	237	35.75			107	40.53	***			
	health service	43	6.49			25	9.47	***			
	manufacturing	39	5.88			13	4.92	***			
	construction	36	5.43			5	1.89	***			
	agriculture	34	5.13			9	3.41	***			
	mining	1	0.15			0	0	*			
	wholesale distribution	27	4.07			8	3.03	*			
	transportation	11	1.66			3	1.14				
	utilities	1	0.15								
	communications	15	2.26			7	2.65				
	finance	12	1.81			4	1.52				
	insurance	6	0.9			4	1.52	***			
	real estate	40	6.03			16	6.06				
business consulting services	53	7.99			8	3.03	***				
Total	663	100			264	100					

Notes: [^] means that number of observations refer to number of entrepreneurs for all the waves observed. Selection of variables included in the multivariate analysis. For computation of Team variables see Appendix A.1.
*p<0.1; **p<0.05; ***p<=0.01

Table 4 Team features and venture's performance- first level

Dependent var. Model	PANEL a (teammates)				PANEL b (affiliates)			
	NF (I.A)	NF (I.B)	QUIT (II.A)	QUIT (II.B)	NF (I.A)	NF (I.B)	QUIT (II.A)	QUIT (II.B)
SIZE	-0.0026		0.0143		0.0133		-0.0188*	
HC		0.0165		0.0015		0.0319***		-0.0697***
Business controls	yes	yes	yes	yes	yes	yes	yes	yes
Year controls	yes	yes	yes	yes	yes	yes	yes	yes
constant	-0.4064***	-0.4294***	-0.9152***	-0.9081***	-0.4671***	-0.5496***	-0.8300***	-0.6168***
N.	1978	1978	1978	1978	1978	1978	1978	1978
Log-likelihood	-2865.77	-2816.992	-2934.89	-2886.112	-4973.77	-4913.069	-5042.305	-4981.604
AIC	5823.54	5733.984	5961.78	5872.223	10039.54	9926.138	10176.61	10063.21
BIC	6080.673	6013.476	6218.913	6151.715	10296.67	10205.63	10433.74	10342.7

Notes: AIC: Akaike's information criterion; BIC: Bayesian information criterion; N. =Obs used in calculating BIC.
*p<0.1; **p<0.05; ***p<=0.01

Table 5 Determinants of team features- second level

Dependent var. Model	PANEL a (teammates)				PANEL b (affiliates)			
	SIZE A.1	SIZE A.2	HC B.1	HC B.2	SIZE A.1	SIZE A.2	HC B.1	HC B.2
Woman	-0.3141***	-0.2658***	-0.1368	-0.0643	-0.1193***	-0.0984***	-0.3030*	-0.2327
Family team	0.9004***	0.8648***	1.4801***	1.4651***	0.0159	0.0069	0.2924*	0.3006*
Education	1.2627***	1.1007***	1.5091***	1.5113***	0.2905***	0.3448***	2.7457***	2.8698***
White	-0.0239	-0.0017	0.1235	0.1566	-0.1197**	-0.1000*	-0.2943	-0.2258
Black	-0.2721*	-0.18	-0.2458	-0.2231	0.1095*	0.074	-0.156	-0.3739
Indian	-0.0022	0.0156	-0.0783	-0.018	-0.1053*	-0.0986	0.2717	0.2943
Money		-0.0135		0.0652**		0.0064		0.0721
Social Recognition		-0.0501**		-0.0472		0.0445***		0.087
Achievement		0.0484**		0.0348		0.0483***		0.2480***
Freedom		-0.1614***		-0.1725***		-0.0315**		-0.0552
Business controls	yes	yes	yes	yes	yes	yes	yes	yes
Year controls	yes	yes	yes	yes	yes	yes	yes	yes
constant	-1.6765***	-1.5217***	-0.4901*	-0.5176*	1.4649***	1.3928***	2.9537***	2.6359***
N.	1978	1978	1978	1978	1978	1978	1978	1978
Log-likelihood	-3692.142	-3651.922	-3761.819	-3721.599	-4637.277	-4585.453	-4696.388	-4644.564
AIC	7478.284	7405.843	7617.638	7545.198	9368.554	9272.907	9486.776	9391.128
BIC	7741.007	7690.925	7880.361	7830.28	9631.277	9557.988	9749.498	9676.21

Notes: AIC: Akaike's information criterion; BIC: Bayesian information criterion; N. =Obs used in calculating BIC.
*p<0.1; **p<0.05; ***p<=0.01

APPENDIX

Table A.1 PSED variables used to calculate SIZE

Variable	Description	PSED II – Allwaves
N_{own}	Total number of other owners (excluding the respondent)	*g2
N_{kno}	Total number of key not owners	*g13
N_{help}	Total number of helpers	ag18

^1: due to the presence of outliers featuring a considerable number of owners, variables are winsorized at 0.01.

* stands for the given wave: e.g., for wave a, we refer to question ag2; for wave b, question bg2; and so on.

Table A.2 PSED variables used to calculate HC

Variable	Description	PSED II – Allwaves
Legality	Dummy variable: it takes the value of one if the owner, Key Not Own or Helper represent a business, financial institution, government agency, or other legal entity	
Education	Highest level of education of the owner, Key Not Own or Helper (1 = up to eighth grade, 2 = some high school, 3 = high school degree/tech. or voc. degree, 4 = some college/comm. college degree, 5 = bachelors degree, 6 = some graduate training, 7 = masters degree, 8 = law, Md, Phd, Edd degree)	
Industryexperience	Years of work experience of owner, Key Not Own or Helper in the industry where the new business is going to compete. Categorical variable from 0 to 6, by year (Y): 0 for 0Y; 1 for 0<Y<1; 2 for 1<	
Business helped	Number of other businesses helped to start by the owner, Key Not Own or Helper	
Manager experience	Years of owner#'s work experience as a manager or supervisor. Categorical variable from 0 to 6, by year (Y): 0 for 0Y; 1 for 0<Y<1; 2 for 1<	
Owners		
O_Legality		*g5_O#
O_Education		*h6_O#
O_Industryexperience		*h11_O#
O_Business helped		*h12_O#
O_Manager experience		*h21_O#
Key Not Own.		
K_Legality		*g15_k#
K_Education		*m7_k#
K_Industryexperience		*m11_k#
K_Business helped		*m12_k#
Helpers		
H_Legality		ag20_h#
H_Education		an7_h#
H_Industryexperience		an11_h#
H_Business helped		an12_h#

^1: due to the presence of outliers, variables other than dummy or categories are winsorized at 0.01.

* stands for the given wave: e.g. for wave a, we refer to question ag5_O#; for wave b, question bg5_O#; and so on.