How the founding team impacts the growth process of early stage innovative startups[1]

Received
8th February 2015
Revised
10th May 2015
Accepted
11st July 2015

Alberto Onetti - Federica Pepponi - Alessia Pisoni

Abstract

Purpose of the paper: *The paper aims at analysing the process of startup creation at its very early stage, investigating the connection between the distinctive traits of the entrepreneurs (the so-called "founding team") and the arising profiles of their new ventures.*

Methodology*: The data are collected during the determinative initial phases of the venture creation. Specifically, a cluster analysis is applied on a sample of 107 Italian innovative startups and their 254 founders. The three emerging clusters show significant differences in terms of entrepreneurial profile and the startup's fundraising ability.*

Findings*: Some specific traits of the entrepreneurial profile of the new venture (mainly the educational background and previous experience), may have an initial imprinting effect on its firm profile and, hence, its likelihood to grow and be successful.*

Research and managerial implications*: Work and international experience appear to be crucial success factors for startups at the very early stage. These characteristics prove to be strong enablers of fundraising, which happens to be vital at this particular time.*

Research limitations*: A cross-country analysis should be performed to better understand the positioning of the Italian startup ecosystem, and to overcome the country specificities of the sample.*

Originality of the paper*: The novelty of this work is represented by the exploration of a population on which we have no great prior knowledge, in a significant, yet peculiar, phase of its life. There are not many empirical/qualitative updated works related to the analysis of the characteristics of Italian startups and their founders.*

Key words: entrepreneurship; startups; founding team; cluster analysis

1. Introduction

The positive impact that new venture creation has on economic growth, innovation and job creation has been proved (Audretsch, 2003). Entrepreneurs are responsible for the economic development through the introduction of innovative ideas, in terms of products, processes, markets and organization. In order to reach this goal, an entrepreneur must be able to successfully implement these innovations, which means to satisfy a (new)

[1] Authors contributed equally to the paper and are listed in alphabetical order. Alberto Onetti and Alessia Pisoni gratefully acknowledge financial support from Ministero dell'Istruzione dell'Università e della Ricerca (MIUR National Research Project) through PRIN 2010 Project: "Scientific research and competitiveness. Variety of organizations, support systems and performance levels".

customer and thus, through job supply, provide economic growth. As stressed by Cuervo *et al.* (2010), the competitiveness of a country's firms, which determines the development of its wealth and dynamism, relies fundamentally on the capabilities of its entrepreneurs and managers. As reported by Reynolds (2004), the junction or "choice point" at which an individual decides to get into the startup process is influenced by three groups of variables, those related to individuals, their characteristics and personal background, to their motivations and cognitive features, and finally to the context or environment in which the process takes place. The output of the process, which is the possibility that the firm is born, develops and grows, or that it ceases, depends on each of these variables. Therefore, creating a new firm is not so simple. It takes different abilities, knowledge and skills, whose impact on the process may depend on the stage of its development (Klotz *et al.*, 2014). For this reason, and given the relevance of the phenomenon of new venture creation, this paper attempts to shed new light on the role played by the characteristics of the entrepreneur(s) in the very early stage of the abovementioned startup process. Thus, we think that the proposed cluster analysis may help in providing useful information on the process of new venture creation.

The paper is structured in four paragraphs. The following section provides a comprehensive review of the literature on entrepreneurial characteristics affecting the startup process. On the basis of the theoretical framework previously described, the third paragraph presents the research design and the methodology. The fourth section describes the analytical procedure and cluster profiles. The last paragraph discusses findings and provides concluding remarks and future research implications.

2. Literature review: the entrepreneurial profile and the startup process

In prevailing literature, entrepreneurship is often linked to the discovery and exploitation of profit opportunities (March, 1991). In any case, as noted by Freeman (1982), firms do not arise spontaneously from opportunities in the absence of human action, but instead are founded through the exploitation of organizational efforts made by individuals. Decisions are made by individuals and are influenced by characteristics related to individuals. This is consistent with the more recent literature on the so called "personality approach/perspective" on opportunity identification, i.e. an individual's unique personality is assumed as the key driving force for entrepreneurial activity. Many authors distinguish entrepreneurs from other individuals by looking for particular cognitive traits, such as risk propensity, need for achievement and self-confidence (Brockhaus, 1980) in order to detect the individual traits that delineate the successful entrepreneur (Timmons and Spinelli, 1994). In particular, two factors are strongly related to the ability to identify new business opportunities: entrepreneurial alertness, i.e. a unique attitude to sense environmental variations and recognize related opportunities (Kirzner, 1978), and prior knowledge and experience (Shane, 2000). Aldrich and

Zimmer (1986) pointed out that a more comprehensive explanation for new firm creation would be that of specifying how individual experience affects the likelihood that people will found firms. Individual prior knowledge and experience could be considered to arise from work experience (Cooper *et al.*, 1994), as well as from education (Gimeno *et al.*, 1997).

An organic attempt to systematize the field of entrepreneurship studies was made by the Entrepreneurship Research Consortium (ERC). The ERC demonstrated that in order to develop a representative portrait of entrepreneurial activity, individuals should be studied in real time, while involved in the startup process (Gartner *et al.*, 2004). By doing so, the ERC classified the main variables that affect new venture creation. The first group of variables is related to the individual's personal characteristics, such as: age, gender, race and ethnicity, region of residence and personal background (i.e. educational background, work experience and functional expertise). The second group is related to the entrepreneur's cognitive features, i.e. motivational drivers that lead an individual to choose the entrepreneurial career rather than others. As pointed out by Shaver (1985), the reasons for getting into a business (or not) matter, because they are generally considered as the basis of intentions. Extensive research examines a wide range of an entrepreneur's personality traits as predictors of entrepreneurial propensity and actions. Specifically, our focus here is restricted to age, level of education and previous experience at individual level. The variable age is investigated in almost every study on entrepreneurs' characteristics. In general, scholars argue that focus on opportunities decreases with age. Empirical research demonstrates that young adults have a stronger focus on opportunities than older adults (Zacher and Frese, 2011). Risk aversion as well as the adoption of responsible behaviours are likely to grow with age (Timmons and Spinelli, 2010). By contrast, to recognise an opportunity, a certain degree of domain-specific knowledge is required.

Educational level is one of the most frequently examined components of human capital since it helps entrepreneurs in recognizing (and exploiting) opportunities (Cooper *et al.*, 1994). The educational level attained by an entrepreneur in school and vocational training can be considered as a proxy for the knowledge acquired by the entrepreneur before initiating a startup (Rauch and Rijsdijk, 2013). Formal education shapes the knowledge, the skills and the perspectives that a person brings to task. Education is seen as providing the necessary cognitive skills to adapt to environmental changes (Hatch and Dyer, 2004) and to improve problem-solving capacity in general (Sapienza and Grimm, 1997). Furthermore, entrepreneurs may also leverage their knowledge and social contacts generated through the education system to acquire resources.

Entrepreneurs' prior work and entrepreneurial experience has been considered in many studies as a proxy for skills and competencies. Prior work experience takes into consideration years of work, corporate role and industry of employment. The number and variety of prior work experiences (Lazear, 2004; Dahl and Reichstein, 2007) are also important aspects. As regards previous entrepreneurial experience, studies often refer to "serial entrepreneurship", defined as the propensity to start up more than one company in one's life (Delmar and Shane, 2006, Presutti *et al.*, 2008) before

launching a successful business. Empirical evidence supports the idea that entrepreneurial startup experience increases the probability of venture success/survival (Dyke *et al.*, 1992). The required knowledge to make business decisions often arises from daily work experience that one has accrued in a lifetime. It has been argued that an entrepreneur with similar experience takes better decisions than an entrepreneur who lacks such experience.

Even though prevailing literature on entrepreneurship seems to be concentrated on the role of the individual entrepreneur, nowadays, innovative firms are more likely to be founded by teams rather than individuals (Gartner *et al.*, 1994; Beckman, 2006). Cooper and Daily (1997) found that successful high-growth firms are usually built around a team. Extensive research reported that team-founded firms have higher success rates, if compared to firms started by single founders (Ensley *et al.*, 2006). In particular, scholars have increasingly recognized the role played by founding teams/early founding teams/new venture teams (Ucbasaran *et al.*, 2003; Klotz *et al.*, 2014) in shaping the new venture in its early stages of development and growth. Research on founding teams has focused mainly on the impact that factors such as team members' basic demographic features and team composition, have on new venture performance. The relationship between founding team composition, i.e. heterogeneity vs. homogeneity, and firm performance despite being in-depth investigated, still remains a controversial issue (Hmieleski and Ensley, 2007). The way teams are formed (Klotz *et al.*, 2014) is crucial because it could affect the success rate of a startup. Team composition analyses the mix of individual's features (i.e. knowledge, skills and competencies). Colombo and Grilli (2005) provide evidence that there are synergistic effects originated by the presence of specific complementary capabilities within the founding team. A recent study by Fern *et al.* (2012) shows how some team members are chosen because they share the same past experience with the founders, while others are chosen to extend the founders' experience.

To sum up, Wright *et al.* (2007) assert that there is a lack of knowledge regarding how individuals and teams impact the effectiveness through which innovative ventures are created and subsequently grown. They also underline the central role played by individuals and teams in the development and growth of technology-based ventures. This is why studying the formation of startup companies means analysing the characteristics of their founders and the way these features affect the output of the entrepreneurial process, i.e. the "initial imprinting effect of the founding team" (Klotz *et al.*, 2014).

Furthermore, there are not many empirical/qualitative updated works related to the analysis on the characteristics of Italian startups and their founders, although this topic is of primary importance to understand the startup process. The novelty of this work is represented by the exploration of a population on which we have no great prior knowledge, in a significant, yet peculiar, phase of its life. Under this perspective, our work differentiates itself from other studies (Grandi and Grimaldi, 2003; Colombo *et al.*, 2004; Colombo and Grilli, 2010; Colombo and

Piva, 2012) mainly because of the analysis performed (no previous cluster analysis on the population of Italian startup/founding teams) and the target population (focus on a very early stage). In our analysis we try to collect knowledge on startups' characteristics during the very first steps of their lives, and not ex post. As reported by Foo *et al.* (2005), we know little about the early phases of teams engaged in new venture activities and the way variables as human capital affect team outcomes. The broad majority of researches on this matter are often performed when the venture has already been successfully formed. One major challenge of studying early entrepreneurship in the Italian scenario is, as reported by Colombo and Piva (2012), to find complete information and univocal estimates on the Italian population of new innovative ventures. This is due to the fact that most individuals who are defined as "self-employed" by official statistics are actually salaried workers with atypical employment contracts. On the basis of official data, such individuals cannot be distinguished from entrepreneurs that create new ventures (Colombo and Grilli, 2005). The effect of this work is represented by the exploration of a population that has been little studied so far, because of the already mentioned difficulties, and it is in a peculiar phase of its life. For these reasons it is very important to look at startups even when they are not yet fully incorporated or operative, to better figure out how they evolve and what are the characteristics driving this evolution.

3. Research design and methodology

The core of this study is to explore the characteristics of Italian startups and of their founders, both as teams and individual entrepreneurs, since these topics appear to be the most critical factors, both for the startup process and for the company's development and growth (Ucbasaran *et al.*, 2003). We also focus on factors enhancing the development of the business idea and on team formation, analysing startups as a whole ("company specific factors") as well as single individuals composing the entrepreneurial team ("human capital"). In our work, we combine data profiling the new ventures with the aggregation at team level of the individual characteristics of team members (i.e. entrepreneurs). Throughout this union, we aim at identifying consistent clusters and the features that are significant for clusterization. To do this, we used dummy and categorical ordinal variables and we classified them using hierarchical cluster analysis. We ran the classification following a post-hoc or a no a priori technique, whose purpose is to define groups according to the data, as explained by Wedel and Kamakura (2002). In order to perform our analysis, we chose the method of cluster analysis, since it "…can provide very rich descriptions of configurations without over specifying the model" (1996, p. 442). As measure of proximity, we employed the squared Euclidean distance, and the hierarchical method was used to approach the analysis. Since we aim at producing an exploratory classification of observations, taking into account that neither the clustering variables nor the number and nature of the resultant groups are strictly linked to deductive theory, the chosen method to identify clustering variables was the inductive one. In fact, as suggested by Ketchen and Shook (1996), we tried to consider as many

variables as possible because it was not foreseeable what variables would differentiate among observations. Moreover, as reported by Punj and Stewart (1983), there are no clear guidelines to determine the boundaries of clusters. Therefore, the use of many clustering variables is expected to maximize the likelihood of discovering meaningful differences. Due to the fact that our sample of data does not contain outliers, we decided not to use standardization of variables. After transforming the non-ordinal categorical variables into dummy variables, we needed to correct multicollinearity of data by reducing from n to n-1 the possible modalities that the variable can assume. We also performed several tests to assess that this operation does not compromise the quality of the information provided.

Sample description

The final sample is composed of 107 Italian innovative startups and 254 entrepreneurs, spread into the different founding teams. Data were collected by the Mind the Bridge Foundation (MTB), a non-profit (501 c3) corporation based in San Francisco, which through its business plan competition, scouts new business projects with a strong commitment to innovation and marked ambitions of growth.

As stated by Foo *et al.* (2005), using data of participants of a business plan competition can be quite useful and relevant (i.e.: identify teams engaged in the early stages of the entrepreneurial process; scout firms and founders characteristics and perform longitudinal studies, monitoring the phenomenon in a specific area or region). The questionnaire submitted to the founders of the startups, participating to the MTB Business Plan Competition, was designed on extant literature by MTB-CrESIT (Research Centre for Innovation and Life Science Management - University of Insubria). Data gathered contain information on the new venture, such as year of incorporation and place of establishment, sector, number of founders, business description and available market data and company investment profile (capital raised and typology of investors). Demographic information on the founders' and management's team includes date and place of birth, gender, education path, corporate role in the new venture, prior working experiences and prior entrepreneurial experience. The survey was administered in a computerized mode, using an online software. Answers were given on a voluntary basis and respondents could complete the questionnaire from June to July 2012. A small part of the received applications was discarded as being partially incomplete.

4. Findings: analytical procedure and clusters description

To perform our analysis, we chose a hierarchical algorithm, the Ward's method (Ward, 1963), as it is best suited for studies in which the number of observations in each cluster is expected to be approximately equal, and there are no outliers (Ketchen and Shook, 1996). Within our data

set, observations with similar entrepreneurial and firm characteristics are assigned into progressively larger endogenously determined clusters. The resulting "dendrogram" represents the dissimilarity among observations. With regard to hierarchical methods, in order to determine the number of clusters in a data set, we followed the basic procedure, as explained by Ketchen and Shook (1996), as there were no significant jumps in the agglomeration coefficients. To this end, we visually inspected the dendogram and performed the cut off determining the number of clusters. Finally, to validate the clusters' solution, we performed the cluster analysis using different algorithms and methods, as no meaningful clusters can be derived from the too small half-samples.

The findings of our analysis consist of three clusters, each one with its own characterization, and a set of variables that turned out to be significant for clusterization. Table 1 summarizes the distribution of variables included in the research model, as a percentage of the total. The level of significance of each variable is verified through a Chi-Square test. To calculate Chi-Square (χ^2), we used a cross-tabulation which shows the frequencies of joint occurrences between variables. We tested the significance using α=0.05. There are five variables that are significant for the clusterization (p-value < 0.05), which are the following: (i) the startup has been funded (χ^2 = 28.08; df[2] 2; p-value 0.000); (ii) the amount of capital raised to date (χ^2 = 85.979; df 14; p-value 0.000); (iii) at least one co-founder has one previous job experience (χ^2 = 17.942; df 2; p-value 0.000); (iv) average number of previous job experiences, as an aggregate of the team (χ^2 = 35.344; df 4; p-value 0.000); (v) average years of previous job experience, as an aggregate of the team (χ^2 = 52.584; df 12; p-value 0.000).

Tab. 1: Clusters specification and variables distribution

	Clusters		
Variables as a percentage of the cluster	**1**	**2**	**3**
Cluster Distribution (*excluding cases = 0,9%*)	19.5%	50%	29.6%
Startup Description			
Life Science Industry	0%	2%	0%
Consumer Products Industry	0%	6%	3%
Web based Industry	48%	52%	59%
ICT Industry	14%	28%	28%
Electronics Industry	14%	2%	3%
Number of Founders:			
1 Founder	24%	22%	22%
From 2 to 3 Founders	57%	65%	56%
From 4 to 5 Founders	19%	13%	22%
The average age of the team is:			
From 18 to 24 years old	10%	0%	3%

2 *df=# of categories* - 1

Startup Funding Profile			
The firm has raised funds	71%	44%	100%
Total amount of funds raised to date:			
From € 0k to 0,9k	29%	56%	0%
From € 1k to 10k	38%	22%	0%
From € 10.1k to 25k	10%	13%	3%
From € 25.1k to 50k	14%	9%	19%
From € 50.1k to 100k	10%	0%	25%
From € 100.1k to 200k	0%	0%	19%
From € 200.1k to 500k	0%	0%	25%
More than € 500k	0%	0%	9%
Co-founders are the main source of funding	57%	33%	47%
Relatives and friends are the main source of funding	5%	2%	0%
Banks are the main source of funding	0%	2%	9%
Other companies are the main source of funding	0%	0%	3%
Angel investors are the main source of funding	5%	4%	13%
Super angel investors are the main source of funding	0%	0%	6%
Foundations are the main source of funding	5%	0%	3%
Accelerators are the main source of funding	0%	0%	6%
Venture capitals are the main source of funding	0%	0%	6%
Startup Foundation Drivers			
Team met during Graduate studies	29%	17%	19%
Team met during Ph.D. studies	5%	19%	6%
Team met at work place	43%	46%	50%
Team met because of family connections	5%	17%	6%
Team met because of friends	38%	31%	38%
Team met in other ways	19%	17%	19%
The source of the business idea was/were:			
Bachelor's Degree	29%	9%	9%
Master's Degree	33%	13%	25%
Ph.D. studies	0%	7%	13%
Research activities	19%	31%	22%
Working in the industry	43%	54%	59%
Other	14%	22%	9%
Team Aggregate Profile			
At least one co-founder lives abroad	10%	13%	9%
At least one co-founder was born abroad	5%	11%	13%
At least one co-founder is a woman	14%	20%	16%

From 25 to 34 years old	57%	43%	56%
From 35 to 44 years old	24%	50%	31%
From 45 to 54 years old	5%	7%	6%
More than 54 years old	5%	0%	3%
At least one co-founder has a Bachelor's degree	81%	61%	75%
At least one co-founder has a Bachelor's degree in Engineering	33%	11%	16%
At least one co-founder has a Bachelor's degree in Business Administration	14%	20%	28%
At least one co-founder attained Bachelor's degree abroad	5%	7%	3%
At least one co-founder has a Master's degree	43%	69%	69%
At least one co-founder has a Master's degree in Engineering	14%	17%	13%
At least one co-founder has a Master's degree in Business Administration	14%	26%	31%
At least one co-founder attained Master's degree abroad	0%	11%	13%
At least one co-founder has a Ph.D.	14%	17%	13%
At least one co-founder has a MBA	0%	7%	9%
At least one co-founder attained Ph.D. abroad	0%	4%	6%
At least one co-founder attained MBA abroad	0%	2%	3%
At least one co-founder has a patent	0%	4%	6%
At least one co-founder has a previous job experience	71%	100%	94%
Average number of previous job experiences:			
Less than 1	76%	13%	16%
From 1 to 2	19%	33%	38%
More than 2	5%	54%	47%
At least one co-founder had one job experience abroad	14%	33%	31%
Average years of job experience:			
Less than 1 year	52%	0%	9%
From 1 to 3 years	24%	6%	6%
From 4 to 7 years	19%	24%	34%
From 8 to 11 years	5%	33%	28%
From 12 to 17 years	0%	20%	13%
From 18 to 25 years	0%	11%	6%
More than 25 years	0%	6%	3%
At least one co-founder had one previous entrepreneurial experience	48%	41%	38%
Total number of previous entrepreneurial experiences:			
No previous one	52%	59%	63%
1 previous experience	10%	17%	6%
2 previous experiences	24%	15%	22%
3 previous experiences	10%	6%	6%
4 previous experiences	5%	4%	3%

Source: our elaboration

The following Table 2 summarizes the characteristics of the three identified clusters. The clusters' profiles show significant differences in terms of entrepreneurial profile (mainly educational background and previous experience, also at international level) and in terms of startup fundraising ability (amount and source of funding).

Table 2: Clusters summary

	Techno entrepreneurs - 1st generation startups (19.5%)	Employees turned entrepreneurs - Born into crisis startups (50%)	Proven entrepreneurs - Scalable startups (29.6%)
Entrepreneurial profile	Technical background Startup is their first work experience Prior entrepreneurial attempts Scarce managerial background No prior job experience	Several previous job experiences Long career as employees Low entrepreneurial attitude	High level of education Solid managerial background Prior job and entrepreneurial experiences International experience
Firm profile	Mainly funded through Bootstrapping Business idea originated during the educational path	Limited ability to attract funds Business idea originated within work environment	Outstanding ability to raise capital and attract structured sources of funding

Source: our elaboration

According to the distinctive features characterizing the identified clusters, we titled Cluster 1: Techno entrepreneurs - 1st generation startups; Cluster 2: Employees turned entrepreneurs - Born into crisis startups and Cluster 3: Proven entrepreneurs - Scalable startups.

Cluster 1: Techno entrepreneurs - 1st generation startups

"Techno entrepreneurs" are young entrepreneurs with a prevailing technical background and no prior job experience. In the majority of cases, techno-startuppers are young adults whose first job experience is represented by the creation of a startup. These entrepreneurs are, as suggested by Sheehy (1976), in their "trying twenties": a particular "stage" representing the time of opportunity where all things seem possible. In other cases, they are research fellows with a technical profile. Some

of the latter declare previous entrepreneurial experience, although more likely via academic spin-offs rather than startups per se. The companies created by techno-startuppers (that we define as "1st generation startups") raise funds mainly from co-founders (57%). The average amount of capital received is quite small, comprised between 1 and 10 thousand euros (38%). Some peculiar traits of these founders may explain why these startups raise limited funding. These include weak managerial background and almost no prior work experience that may compromise their ability to attract more structured sources of funding. Furthermore, young entrepreneurs face greater difficulties in fund raising (especially from institutional investors) compared to their elder peers (Ierapetritis *et al.*, 2010; Cannone *et al.*, 2014). 24% of founding teams are pretty lean. These ventures operate mainly in high-tech fields. Not surprisingly, the inspirational source of their business idea is represented primarily (62%) by the educational path undertaken by the co-founders, which is also often responsible for their team formation at an academic institution.

Cluster 2: Employees turned entrepreneurs - Born into crisis startups

Founding teams within this group are formed by individuals mainly coming from more conventional job positions. In fact, as reported by recent studies published by Italian Chambers of Commerce, with the advent of the financial crisis many people who lost or were unsatisfied with their jobs reinvented themselves into startuppers (a sort of "career pivoting"). This explains why among these teams we find individuals with a high level of job experience and long employment tenure. For these reasons, we decided to label them as "Employees turned Entrepreneurs". In many cases, individual achievement acts as a trigger in the decision of such individuals to become entrepreneurs. This is consistent with prior research, which argues that some employed individuals are likely to start new ventures for two main reasons (Johnson *et al.*, 2004). They are people with low job satisfaction related to their current jobs or they are people whose job satisfaction is a stronger predictor of life satisfaction. Thus, the need for independence and for self-recognition may turn into a strong push to become self-employed. The companies created by these employees-turned-startuppers are what we define "Born into crisis startups". Within this cluster, startups show a limited ability to raise capital (only 44% of them received external funds). The co-founders' background is responsible for the low entrepreneurial attitude characterizing these startups. The prior work environment plays a critical role in this group, being the main source of inspiration of the business idea. Note that in 20% of the teams there is at least one female co-founder.

Cluster 3: Proven entrepreneurs - Scalable startups

Proven entrepreneurs are highly educated and experienced. This group is characterized by the highest level of education: 13% of the founders have a Ph.D. and almost one out of ten has a MBA. They have strong managerial background (more than half of them have a degree in Business Administration) and are quite experienced. Almost all of them present

prior job experience and 38% a previous entrepreneurial experience. Such percentage may look a little small. In fact, we believe that teams involved in these startups are driven and motivated by a precise and structured entrepreneurial idea, which explains why they are so good at fundraising. Furthermore, these founding teams present a broad international experience, as 31% of the co-founders had at least one job experience abroad and 25% attained a degree in a foreign university. The work environment (50%) represents the most common place for future co-founders first meeting. This could mean that after they met and developed the business idea, which has quite varied origins, into an effective business model (Onetti *et al.*, 2012), they decided to become full-time entrepreneurs. Co-founders are characterized by different sources of specific knowledge, performing a good balance between technical and managerial skills. This seems to be a successful ingredient not only for the exploitation of the business idea (Colombo and Grilli, 2005), but also for enhancing team performance on the long run (Steffens *et al.*, 2012). Evidence of this success is provided by the high amount of funds raised by these startups. Thus, we called the founders of such startups "Proven Entrepreneurs". We define the companies that originated by these teams as "Scalable Startups", since these ventures have greater efficacy in raising capital and, therefore, higher chances to succeed. All of them were successful at fundraising, and more than 30% raised more than 200 thousand euros (50% more than 100 thousand euros). They were able to attract funds from structured sources such as seed funds, foundations, accelerators and venture capitalists.

5. Discussion and conclusion

Based on the cluster analysis described above, we identified three clusters. Some general considerations emerge. The degree of fundraising is significantly different among clusters. The first cluster displays scarce variety among the sources of funding and a reduced ability to obtain medium-large amounts of capital. The second group also shows limited abilities to raise capital. The companies included in the third cluster present, instead, an outstanding ability in raising money. The level of job experience of the founders fairly varies among groups. Teams of the first cluster are characterized by a low level of experience, both in terms of number of prior jobs and years of employment. The second group includes a sample of firms whose founders show longer work experience. The third cluster displays a high level of job experience and a stronger international attitude. These results are supported by literature. In fact, Shane and Khurana (2003) affirm that differences in career experience lead to differences in evaluations, by potential entrepreneurs themselves and by others, of an entrepreneur's ability to: (i) access resources that help entrepreneurs in starting organizations; (ii) adapt to the role of the entrepreneur; (iii) continuously adapt the business model to market needs/changes.

Therefore, previous work experience is the key in both venture creation and fundraising. Scholars argue that individual career experiences are positively related to the ability of obtaining resources (Haveman and Cohen, 1994; Shane and Cable, 2002). Furthermore, Shane and Khurana (2003) point out that one of the founders' harder tasks is to convince others to reallocate resources in non-traditional ways. They state that if individuals are successful in their prior careers, they will be more likely able to convince not only potential investors, but also employees and other stakeholders. The characteristics of the entrepreneurial team as a whole are also relevant for the final output.

These findings are quite interesting, as they remark how work and international experience are crucial success factors for startups at the very early stage (as are those participating in a business plan competition). Actually, these characteristics prove to be strong enablers of fundraising, which happens to be vital at this particular time, allowing startups to get off the ground and consequently grow. In addition, our findings support the argument, inspired by competence-based theories, that founders' capabilities and knowledge are a key driver for startups growth. Innovative firms, founded by individuals who have a higher level of work experience, show superior growth, with everything else equally contributing (Colombo and Grilli, 2005). Moreover, Colombo and Grilli (2005) asserted that startups established by such individuals are more likely to obtain venture capital financing, which of course has a sizeable positive effect on their growth. The latter relationship is clearly visible in our results as well. Founders of firms belonging to cluster 3 present, in fact, qualified international working experiences, contributing to the ability of their startups to attract huge amount of funds from various sources.

With regard to further research, we identified two directions that, in our opinion, appear to be especially promising. First of all, recent studies (Klotz *et al.*, 2014) suggest examining how the characteristics of the firm are influenced by the team composition and stage of development. For instance, firms and teams features may differ from the idea of the evolution phase to the exploitation phase. From the results presented in this work, it seems clear that team characteristics drive the startup evolution at a very early stage. Further analysis could highlight how those features may differ as the company reaches a later stage of development and fundraising is no longer the primary need. In addition, a cross-country analysis should be performed to better understand the positioning of the Italian startup ecosystem, and to allow overcoming the country specificities of the sample that may lead to results that are not fully generalizable. Since accounting for the role of individuals in the startup process is critical for advancing theory, a cross-country comparison of entrepreneurs/new venture team samples may represent stimulating challenges for future research.

References

ALDRICH H.E., ZIMMER C. (1986), "Entrepreneurship through Social Networks", in Sexton D., Smilor R. (Eds.), *The Art and Science of Entrepreneurship*, Ballinger, New York, NY, pp. 3-23.

AUDRETSCH D.B. (2003), "Entrepreneurship policy and the strategic management of places", in Hart D.M. (Ed.), *The emergence of entrepreneurship policy*, Cambridge University Press, New York, NY, pp. 20-38.

BECKMAN C.M. (2006), "The influence of founding team company affiliations on firm behavior", *Academy of Management Journal*, vol. 49, n. 1, pp. 741-758.

BROCKHAUS R.H. (1980), "The effect of job dissatisfaction on the decision to start a business", *Journal of Small Business Management*, vol. 18, n. 1, pp. 35-42.

CANNONE G., PISONI A., ONETTI A. (2014), "Born global companies founded by young entrepreneurs. A multiple case study", *International Journal of Entrepreneurship and Innovation Management*, vol. 18, n. 2/3, pp. 210-232.

COLOMBO M.G., DELMASTRO M., GRILLI L. (2004), "Entrepreneurs' human capital and the start-up size of new technology-based firms", *International Journal of Industrial Organization*, vol. 22, n. 8, pp. 1183-1211.

COLOMBO M.G., GRILLI L. (2005), "Founders' human capital and the growth of new technology-based firms: A competence-based view", *Research Policy*, vol. 34, pp. 795-816.

COLOMBO M.G., GRILLI L. (2010), "On growth drivers of high-tech start-ups: Exploring the role of founders' human capital and venture capital", *Journal of Business Venturing*, vol. 25, n. 6, pp. 610-626.

COLOMBO M.G., PIVA E. (2012), "Firms' genetic characteristics and competence-enlarging strategies: A comparison between academic and non-academic high-tech start-ups", *Research Policy*, vol. 41, n. 1, pp. 79-92.

COOPER A.C., DAILY C.M. (1997), "Entrepreneurial teams", in Sexton D.L., Smilor R.W. (Eds.), *Entrepreneurship 2000*, Upstart Publishing, Chicago, IL, pp. 127-150.

COOPER A.C., GIMENO-GASCON F.J., WOO C.Y. (1994), "Initial human and financial capital as predictors of new venture performance", *Journal of Business Venturing*, vol. 9, n. 5, pp. 371-395.

CUERVO A., RIBEIRO D., ROIG S. (Eds.) (2010), Entrepreneurship: Concepts, Theory and Perspective, Springer-Verlag, Berlin Heidelberg.

DAHL M.S., REICHSTEIN T. (2007), "Are You Experienced? Prior Experience and the Survival of New Organizations", *Industry and Innovation*, vol. 14, n. 5, pp. 497-511

DELMAR F., SHANE S. (2006), "Does experience matter? The effect of founding team experience on the survival and sales of newly founded ventures", *Strategic Organization*, vol. 4, n. 3, pp. 215-247.

DYKE L.S., FISCHER E.M., REUBER A.R. (1992), "An Inter-industry Examination of the Impact of Owner Experience on Firm Performance", *Journal of Small Business Management*, vol. 30, n. 4, pp. 72-87.

ENSLEY M.D., HMIELESKI K.M., PEARCE C.L. (2006), "The importance of vertical and shared leadership within new venture top management teams: Implications for the performance of startups", *Leadership Quarterly*, vol. 17, n. 1, pp. 217-231.

FERN M.J., CARDINAL L.B., O'NEILL H.M. (2012), "The genesis of strategy in new ventures: escaping the constraints of founder and team knowledge", *Strategic Management Journal*, vol. 33, pp. 427-447.

FREEMAN J.H. (1982), "Organizational life cycles and natural selection process", in Staw, B. and Cummings, L. (Eds.), *Research in Organizational Behavior*, vol. 4, JAI Press, Greenwich, CT, pp. 1-32.

FOO DER M., WONG KAM P., ONG A. (2005), "Do others think you have a viable business idea? Team diversity and judges' evaluation of ideas in a business plan competition", *Journal of Business Venturing*, vol. 20, n. 3, pp. 385-402.

GARTNER W.B., SHAVER K.G., CARTER N.M., REYNOLDS P.D. (Eds.) (2004), *Handbook of Entrepreneurial Dynamics: The Process of Business Creation*, Sage Publications, Thousand Oaks, CA.

GARTNER W.B., SHAVER K.G., GATEWOOD E.J., KATZ J.A. (1994), "Finding the entrepreneur in entrepreneurship", *Entrepreneurship Theory and Practice*, vol. 18, n. 1, pp. 5-9.

GIMENO J., FOLTA T., COOPER A., WOO C. (1997), "Survival of the fittest? Entrepreneurial human capital and the persistence of underperforming firms", *Administrative Science Quarterly*, vol. 42, pp. 750-783.

GRANDI A., GRIMALDI R. (2003), "Exploring the Networking Characteristics of New Venture Founding Teams: A Study of Italian Academic Spin-off", *Small Business Economics*, vol. 21, n. 4, pp. 329-341.

HATCH N.W., DYER J.H. (2004), "Human Capital and Learning as a Source of Sustainable Competitive Advantage", *Strategic Management Journal*, vol. 25, pp. 1155-1178.

HAVEMAN H.A., COHEN L.E. (1994), "The ecological dynamics of careers: The impact of organizational founding, dissolution, and merger on job mobility", *American Journal of Sociology*, pp. 104-152.

HMIELESKI K.M., ENSLEY M.D. (2007), "A contextual examination of new venture performance: Entrepreneur leadership behavior, top management team heterogeneity, and environmental dynamism", *Journal of Organizational Behavior*, vol. 28, pp. 865-889.

IERAPETRITIS D.G., LAGOS D., BALOMENOU K.C. (2010), "Outlining the determinants of youth entrepreneurship in the Greek periphery", *International Journal of Entrepreneurship and Small Business*, vol. 11, n. 2, pp. 205-217.

JOHNSON K.L., ARTHAUD-DAY M.L., RODE J.C., NEAR J.P. (2004), "Entrepreneurial Expectancies", in Gartner W.B., Shaver K.G., Carter N.M., Reynolds P.D. (Eds.), *Handbook of Entrepreneurial Dynamics: The Process of Business Creation*, Sage Publications, Thousand Oaks, CA, pp. 163-170.

KETCHEN D.J., SHOOK C.L. (1996), "The application of cluster analysis in strategic management research: an analysis and critique", *Strategic Management Journal*, vol. 17, n. 6, pp. 441-458.

KIRZNER I.M. (1978), *Competition and Entrepreneurship*, University of Chicago Press, Chicago, IL.

KLOTZ A.C., HMIELESKI K.M., BRADLEY B.H., BUSENITZ L.W. (2014), "New Venture Teams: A Review of the Literature and Roadmap for Future Research", *Journal of Management*, vol. 40, n. 1, pp. 226-255.

LAZEAR E. (2004), "Balanced skills and entrepreneurship", *The American Economic Review*, vol. 94, n. 2, pp. 208-211.

MARCH J.G. (1991), "Exploration and exploitation in organizational learning", *Organization Science*, vol. 2, n. 1, pp. 71-87.

ONETTI A., ZUCCHELLA A., JONES M.V., MCDOUGALL P.P. (2012), "Internationalization, Innovation and Entrepreneurship: Business Models for New Technology-based Firms", *Journal of Management and Governance*, vol. 16, n. 3, pp. 337-368.

PRESUTTI M., ONETTI A., ODORICI V. (2008), "Serial Entrepreneurship and Born-Global New Ventures. A Case Study", *International Review of Entrepreneurship*, vol. 6, n.4, pp. 255-278.

PUNJ G., STEWART D.W. (1983), "Cluster analysis in marketing research: review and suggestions for application", *Journal of Marketing Research*, vol. 20, n. 2, pp. 134-148.

RAUCH A., RIJSDIJK S.A. (2013), "The Effects of General and Specific Human Capital on Long-Term Growth and Failure of Newly Founded Businesses", E*ntrepreneurship Theory and Practice*, vol. 37, n. 4, pp. 923-94.

REYNOLDS P.D. (2004), "Overview: Life Context, Personal Background", in Gartner W.B., Shaver K.G., Carter N.M. and Reynolds P.D. (Eds.), *Handbook of Entrepreneurial Dynamics: The Process of Business Creation*, Sage Publications, Thousand Oaks, CA, pp. 3-11.

SAPIENZA H., GRIMM C. (1997), "Founder characteristics, start-up process and strategy/structure variables as predictors of shortline railroad performance", *Entrepreneurship Theory and Practice*, vol. 22, n. 1, pp. 5-24.

SHANE S.A. (2000), "Prior knowledge and the discovery of entrepreneurial opportunities", *Organization Science*, vol. 11, n. 4, pp. 448-469.

SHANE S.A., CABLE D. (2002), "Network ties, reputation, and the financing of new ventures", *Management Science*, vol. 48, n. 3, pp. 364-381.

SHANE S.A., KHURANA R. (2003), "Bringing individuals back in: the effects of career experience on new firm founding", *Industrial and Corporate Change*, vol. 12, n. 3, pp. 519-543.

SHAVER K.G. (1985), *The attribution of blame: Causality, responsibility, and blameworthiness*, Springer-Verlag, New York, NY.

SHEEHY G. (1976), *Passages: Predictable Crisis of Adult Life*, Dutton, New York.

STEFFENS P., TERJESEN S., DAVIDSSON P. (2012), "Birds of a feather get lost together: new venture team composition and performance", *Small Business Economics*, vol. 39, n. 3, pp. 727-743.

STOCK R.M., ZACHARIAS N.A. (2011), "Patterns and performance outcomes of innovation orientation", J*ournal of the Academy of Marketing Science*, vol. 39, n. 6, pp. 870-888.

TIMMONS J.A., SPINELLI S. (1994), *New venture creation: Entrepreneurship for the 21st century*, Irwin, Boston, MA.

TIMMONS J.A., SPINELLI S.J. (2010), *New Venture Creation, Entrepreneurship for the 21st Century*, McGraw Hill International Edition, New York.

UCBASARAN D., LOCKETT A., WRIGHT M., WESTHEAD P. (2003), "Entrepreneurial founder teams: Factors associated with member entry and exit", *Entrepreneurship Theory and Practice*, vol. 28, n. 1, pp. 107-127.

WARD J. (1963), "Hierarchical Grouping to Optimize an Objective Function", *Journal of the American Statistical Association*, vol. 58, n. 301, pp. 236-244.

WEDEL M., KAMAKURA W. (2002), "Introduction to the special issue on market segmentation, International", *Journal of Research in Marketing*, vol. 19, n. 3, pp. 181-183.

WRIGHT M., HMIELESKI K.M., SIEGEL D., ENSLEY M.D. (2007), "The role of human capital in technological entrepreneurship", *Entrepreneurship Theory and Practice*, vol. 31, n. 6, pp. 791-806.

ZACHER H., FRESE M. (2011), "Maintaining a focus on opportunities at work: the interplay between age, job complexity, and the use of selection, optimization, and compensation strategies", *Journal of Organizational Behavior*, vol. 32, n. 2, pp. 291-318.

Academic or professional position and contacts

Alberto Onetti
Associate Professor of Business Management
University of Insubria - Italy
e-mail: alberto.onetti@uninsubria.it

Federica Pepponi
Research Fellow at CrESIT (Research Centre for Innovation and Life Science Management)
University of Insubria - Italy
e-mail: federica.pepponi@uninsubria.it

Alessia Pisoni
Researcher of Business Management
University of Insubria - Italy
e-mail: alessia.pisoni@uninsubria.it

sinergie
italian journal of management

ISSN 0393-5108
DOI 10.7433/s97.2015.04
pp. 37-53

CUEIM