THE EFFECT OF THE FOUNDERS GROUP
CHARACTERISTICS IN PRE-START UP PHASE ON
INNOVATIVE FIRMS PERFORMANCE

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1 This work is the result of the combined reflection of the authors; however, for paragraphs 1.2, 1.3 and 1.4 is responsible the first author, while paragraphs 1.1, 1.5 and 1.6 are the work of the second author.
Abstract
Gaining understanding in entrepreneurial team formation during the venture creation process is particularly relevant for investors as well as technology transfer officers. Research has shown that venture capitalists state that the quality of the founding team is one of the most important criteria when they decide to invest in a start-up. Although relatively limited, an emerging body of entrepreneurship and organizational literature has started focusing on team-level issues and only recently, attention has shifted from the lone entrepreneur/founder to the whole entrepreneurial team. This stream of research mainly examined team process and effectiveness. While scholars suggest that diversity is an important topic in both academic research and practice and team heterogeneity has important influence on firm performance, however, research on demographic diversity in entrepreneurial teams is still limited.

The present paper focuses on characteristics of founding team groups in pre-start up phase, and on the changes that occurs in terms of founders group’s structure in the process of constitution. We assess that predictors of success of an entrepreneurial founders group, measured in terms of turning the business idea in a real company, are group’ size, higher levels of education, differentiation in competencies, work experience and heterogeneity of backgrounds of the founders. Moreover we discuss on absorptive capacity and dynamic capabilities (Nelson & Winter, 1982, Cohen & Bacdayan, 1994; Zahra & Georges, 2002; Winter, 2003) stating that changing in the groups’ structure in terms of entry and leaving of different members improves the capability of entrepreneurial group and then the chances of constitution of a new company.

Our paper contribute to the literature on innovation business venture formation mainly in two way: first in terms of the robustness of results, due to the consistency of the data-set we analyzed in terms of amount of different data and their longitudinal nature. Second because, since we are interested in team formation and development, it is important to get information from the original founding team and from relevant stakeholders in the parent organization and environment and we used different kind of sources to collect data directly from founders even post facto.

These conclusions have major implications on how innovative start-ups are evaluated by investors and in terms of policy that support ventures creation. Important managerial implications arise from our findings.

1.1 Introduction
The new ventures creation arisen in recent years as an important and interesting field of research. That is because regional and national economic growth is tightly dependent of the capacity of its
citizens to set up and run new business and the more this company are innovative, the more the country would gain competitiveness in a global economy.

Several researchers studied the phenomenon using different prospective. Contribution in different field such as entrepreneurship, strategy, economic policy, sociology and economic geography approached the problem at different levels: individual to network, single enterprise to macroeconomic point of view. Researchers on entrepreneurial start-ups suggested that firms founded by entrepreneurial teams generally perform better than those run by “lonely Hero” (Johannison, 1998; Bird, 1989, Kam et al,1990). This success can be attributed to the logic that “high technology industries might require more skills than an individual would be likely to have, necessitating that individual combine their abilities in team in order to start an organization successfully” (Gartner, 1985, p.703).

Human capital, comprised of work experience, education and other skills and perspectives that increase knowledge accumulation and business acumen, is an important characteristic of entrepreneurial capability (Sexton & Upton, 1985). Human capital and interpersonal processes are considered important to venture success (Ibrahim and Goodwin,1987) and influence venture outcomes and assumptions about firm performance. Thus, human capital characteristics and organizational demographics may significantly impact venture partner assessments of firm performance, assessments that are important for effective functioning in the venture. While financial capital traditionally has been analyzed to evaluate venture feasibility, human capital is beginning to considered as an equal in predicting venture performance (Chandler & Hanks, 1994, 1998; Chandler and Jansen, 1992; Duchesnau & Gartner, 1990; Cooper & al., 1994; Pennings & al., 1998) and appears substitutable for financial capital (Boone & van Witteloostuijn, 1996; Chandler & Hanks, 1998).

Recently, attention has shifted from the lone entrepreneur/founder to the whole entrepreneurial team (Cooper & Daily, 1996) because researchers enlighten that innovation is more probably to be produced by a group of person (i.e. researchers in a lab, group of students, people that work together with different competences).

Although relatively limited, an emerging body of entrepreneurship and organizational literature has started focusing on team-level issues (Frances & Sandberg, 2000; McGrath & al., 1994, 1995, 1996; Higashide & Birley, 2002; Lechler, 2001; Watson & al., 1995). This stream of research mainly examined team process and effectiveness. While scholars suggest that diversity is an important topic in both academic research and practice (Cox, 1993; Knouse & Dansby, 1999; Pelled & al., 1999) and team heterogeneity has important influence on firm performance (Ensley & al., 1998), however, research on demographic diversity in entrepreneurial teams is still limited (Lyon & al.,
2000; Sahlman, 1997; Caldwell, 1992; Smith & al., 1994). Heterogeneous teams, with their suggested benefits of improving creativity and innovativeness (Sethi et al, 2002) should be well suited for entrepreneurial venture performance but on the other hand, heterogeneity might produce conflicts among members. Research on team composition remain inconclusive since it provides contradictory findings on the effects of demographic diversity on team effectiveness (Pelled et al, 1999; Yu, 2002).

Some researchers stated that entrepreneurial start-up teams that are larger than four persons might be interesting to convince an investor, but are in practice very difficult to run (Jehn, K., 1997; Watson, 2003).

Zahra e George (2002, p.186) defined absorptive capacity as “a dynamic capability that consists of a set of organizational routines and processes”. Routines and capabilities are the organizational processes that make skills and resources work together and organizational processes consist of social interaction. Social interaction mechanisms influence the social interactions and, thus, the knowledge processes that take place among organizational members (Hansen, 2002; Brown & Duguid, 1991).

The present research reflects on the pre-start-up phase and analyzes the topic focusing at the group level. The aim is to understand how the group demography and composition, in terms of width, gender, diversity in education level and knowledge field and its variability in time have an impact on the decision of creating a new company.

1.2 Research Hypothesis

Despite the fact that the venture capital literature consistently points to the entrepreneurial team as “the” most important factor that makes professional investors decide to enter a company (e.g., Cyr et al., 2000), very little insights exist about how entrepreneurial teams are formed, how these teams evolve in the pre-start or incubation phase, and how they eventually gain, both through influx of new members and through learning by experience, enough maturity to attract a professional financial investor. Many researchers have suggested that diversity in a team improves team effectiveness because diversity enhances team decision making by bringing broader perspectives and a larger pool of alternative solutions and alternative ideas together (Hoffmann & Maier, 1961). Other researchers have stated that teams with diverse cognitive capabilities in terms of skills, knowledge, abilities and perspectives made more innovative and higher quality decisions compared to those with less diverse cognitive capabilities (Bantel & Jackson, 1989; Murray, 1989). Entrepreneurial start-up teams that are larger than four persons might be interesting to convince an
investor, but are in practice very difficult to run. They need too much overhead and create too much tension between management authority and shareholder power.

We agree however that having a large group of aspiring entrepreneurs can favour the foundation of a new start up.

_Hypothesis 1_- There is a positive correlation between the size of the original entrepreneurial group and its performance in terms of constitution of the firm.

A recent perspective in human capital research is the examination of the influence of levels of work experience and education on organizational outcomes. Education provides the knowledge base, analytical and problem-solving skills to more effectively deal with the demands of entrepreneurship. Research generally supports the link between an individual’s education level and entrepreneurial performance (Cooper and Gimeno-Gascon, 1992). The entrepreneur’s education is supplemented by work experience, which provides the tacit knowledge necessary for devising strategy, acquiring resources and all the other necessities associated with venture performance. Teaming allows for the expansion of the knowledge base and managerial know-how in the venture and enhances the growth prospects of the firm (Cooper et al., 1994).

In terms of human capital, partners in ventures in which there were higher levels of education and greater work experience assessed their business to be growing. Human capital considerations and the associated skills, knowledge, and abilities, should be important to partners and venture capital institutions when making decisions concerning the initiation and guidance of ventures.

Previous research has shown that early-stage venture capital funds use the “business experience” of the entrepreneurial team as a main criterion to consider investment. As a result, many high-tech start-ups and especially research-based spin-offs do not receive funding because they have no experienced manager within the start-up team (Chowdhury, 2005).

The heterogeneity of personal characteristics, prior experience, and background, which is the basis of role articulation, makes it easier to cope with the difficulties that typify a new venture generation process.

_Hypothesis 2_- The more the group is heterogeneous in competences and functional background, the greater are the chances to constitute the company.

A group’s diverse cognitive resources are captured in a team-level capability through the members interaction process and is an important contributors to team competency and ultimately its performance (McGrath et al. 1995, 1996). The team interaction process that brings together contrasting points of view is important for developing a broader team level understanding.
Additionally entrepreneurship research has found that such team process variables as team comprehension and daftness are important contributors to team competency and ultimately new venture performance (McGranth et al., 1994, 1995, 1996). Team comprehension has defined as a team collective understanding of important drivers of its venture and is defined as “collective minds” that creates effective relationships among members and that allows effective execution of interrelated activities (Chowdhury, 2005). Several studies confirmed that there is a positive relation between absorptive capacities developed by a group and its success in terms of performances. The business idea first originates within the aspiring entrepreneur groups, yet, this does not mean that all of the members of the first group will be part of the new ventures’ founding team. Only some of them will become involved in the new company property’ structure. In the process of transforming the business idea in to a real company it is common to observe a variation of the group’s members: different persons would be involved in the structure while other would quit. The involvement of new external parties provides the company the opportunity to restructure itself. We think that these external shocks improve the quality of group heterogeneity and consist in an opportunity of developing new knowledge instead of consisting in a problem for the team equilibrium and absorptive capacity’ stock that the team developed.

Hypothesis 3- The dynamic of the group’s variability during the evolution process has a moderator effect in the constitution of the firm.

1.3 Research Setting
We use a longitudinal approach to track and analyze changes over time, on 190 groups of potential entrepreneurs that took part in the Spinner Financing Programme, run by Emilia-Romania Region, University of Bologna and Sviluppo Italia from June 2001 to July 2005.
For every single group we investigated three single points in time: the first at the business idea application to access the Spinner Programme; the second after one year when they produce a business plan and the last one at June 2007 to evaluate the present situation of the business².
To better describe and analyze the groups of aspiring entrepreneurs in the first two steps, we used Spinner Consortium documents. In particular to compose the evolution process of the 190 groups that took part in the Programme, we investigated for each of them: report card, personal files, project file and attached documents, monitoring reports, business plan, examination proceedings and after care form. To fill any gap of information we had using the documents above, we collected

² It is important to enlighten that the third step for those projects that accessed the Spinner Programme in the first year (2001) were evaluated at more than 4 years from the business plan exhibition, while business idea presented in 2005 the analysis is done after just one year from the BP production.
direct interviews with persons in charge for the Spinner Programme from the beginning. To analyze the present situation of both groups that decided to set up a company and that decide to quit we realized telephone questionnaires with the accountable for the group itself.

On the whole we analyze 190 business idea, 849 personalized action plan, 190 business plan, 190 monitoring reports, 190 telephonic interviews.

We collected real-time longitudinal, quantitative and qualitative data and attempted to extract theory from the ground up (Eisenhardt, 1989; Langley, 1999).

In the study we use a number of different variables. First of all we count for the size of each group over time, counting for number of substitution that occurred to the early founder group since the company’s constitution. We run a simple regression to test our first hypothesis. Second we count for education heterogeneity of the group members, constructing an index equal to one if every single person in the group has its education and work experience in the same area. It is made up of a single item variable, counting the number of different skill-profiles available within the company at start-up out of the total number of skill-profiles required in order to effectively run the business (technical, financing and managing competencies) (Hall & Hofer, 1993). Moreover we count for the number of academic involved in the new venture at start-ups and we defined a variable that count prior work experience refers to the extent to which founders have been occupied in other jobs (Roure & Keeley, 1990). We run a logit regression model to verify the hypothesis. We then looked at the gender composition of groups in terms of prevalence of women and men in teams.

Then we analyse the education background grouping the team in four typologies: 1. groups with very high educational level (more than the 50% of the member belong to academic community); groups with high educational level (all the member are graduate); groups with educational level on average (more than the 50% of the member are graduate); groups with low educational level (more than the 50% of the member are not graduate). We measured the probability that the prevalence of each of those level in a group has in terms of constitution, using a Logit regression model.

Third, we analyzed the working status of group members, constructing a variable that counts different group according to the prevalence of the working situation that its members had. For example we classified as a group of unemployed one where the 51% of the total number of members were not working. Then, we ordered the teams in three classes: 1. groups with employed or not occupied member; 2. groups with employed members; 3. groups with unemployed members.

Finally we analyzed the teams focusing on constitution’s process. We, in fact, studied the changes occurred in each of the groups in terms of number of member’s leaving and coming to test a mediation effect of the number of chances on company constitution.
We measure the company performance using a binary index that specifies if a company is established or not. This measure of performance is coherent with the particular point in time that we analyze – the pre-start-up phase- because there is still a large *alea* on the effectiveness of business creation. We then decide to agree with van Gelderen, Thurik & Bosma (2006)’ sentence that states that “*the first success for an enterprise is to be set*”.

We used a control group to test our hypothesis made by all the groups inserted in the Spinner Programme that decided to quit. This control group is consistent with the analysis because it shows the same background condition, it is made under the same condition and it is even co-localized, clearing up every possible problems caused by the context’s influence.

### 1.4 Discussion

The analysis started focusing on the description of the 190 groups at the first step, that is when they access with their business idea to the Spinner Programme. The 57% of the group were formed by 4 to 6 partners, 11% by 7 to 9 members and 31% by 2 to 3. Only 2 groups were formed by more than 9 persons.

The largest part of groups included people with heterogeneous working status. The 78% of them, in fact, were set up by people partly unemployed and partly already employed, while only the 19% of the groups were formed only by members that were looking for job. Only in the 2% of groups all partners were already working. The high incidence of employed people in the groups is a unexpected situation since the Spinner Programme provided some specific contributions (e.g. annual scholarships for members who were unemployed) but no subsidy was expected for people that already work. This circumstances could explain, therefore, an high percentage of groups that were shaped by unemployed people or could be evidence for the promoters’ high motivation but appears less clarifying to describe such an important presence of employed in the aspiring entrepreneurs groups of promoters.

Looking at the education level get from the aspiring entrepreneurs in the dataset, we noticed that in the 17,4% of groups half of the partners were academics or come from research labs; the 33,2% were formed by people who got university degree and the 39,5% have at least half of the members who were graduated. Such an high education level common to almost all the groups is due to the specific targeting of the Spinner Project who intend to spur persons to exploit the research results they obtained in their studying or working creating a concrete business company. Spinner, in fact, promote its project in Universities and research labs even opening assistance points in several faculties.
Focusing on different competences hold by groups, it is possible to notice that at the first step, the 57% (109 groups) of teams of aspiring entrepreneurs that apply to the Spinner Programme had inhomogeneous skills.

Groups of aspiring entrepreneurs are mostly formed by male: 28.9% of groups have only male members while the 38.9% is shaped most by male and only 6% are the groups in which partners are all female.

Not all the groups have decided to set up a company. Comparing the groups that decided to quit (NCNC) to groups that, on the other hand, established a new enterprise (NCC) and to others that still are considering what to do (table 1.1) become really interesting in the aim of testing our hypothesis.

Table 1.1 – Groups by number of members and outcome in terms of constitution of a Newco

<table>
<thead>
<tr>
<th>Value</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Groups that set up a new company (NCC)</td>
<td>79</td>
</tr>
<tr>
<td>Groups that decided to not constitute (NCNC)</td>
<td>69</td>
</tr>
<tr>
<td>Groups in stand-by</td>
<td>42</td>
</tr>
<tr>
<td>Total number of groups</td>
<td>190</td>
</tr>
</tbody>
</table>

Regarding our first hypothesis we analyzed the group size in correlation to the constitution of a new business venture.

On average groups who constitute a new company were shaped by a mean of almost 5 members (4.89 persons) while in groups that decided to not set up there where a mean of almost 4 partners (3.92 persons). The more the numerousness of groups members arise, the more the percentage of set up a new company increases (table 1.2). Focusing only on the 59 groups formed by less than 4 members, it is interesting to notice that the 52% quit, the 32% set up a new company and the 16% are still in stand-by (table 1.3).

Table 1.2– Groups by number of members and outcome in terms of constitution of a Newco

<table>
<thead>
<tr>
<th>Groups by number of members at the first point in time</th>
<th>% of constitution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Groups with less than 4 members</td>
<td>32%</td>
</tr>
<tr>
<td>Groups with members between 4 and 6</td>
<td>42%</td>
</tr>
<tr>
<td>Groups with members between 7 and 9</td>
<td>57%</td>
</tr>
<tr>
<td>Groups with more than 9 members</td>
<td>100%</td>
</tr>
</tbody>
</table>
Table 1.3 – Groups by number of members and outcome in terms of constitution of a Newco

<table>
<thead>
<tr>
<th>Groups by number of members</th>
<th>Number of NCNC</th>
<th>%</th>
<th>Number of NCC</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Groups with less than 4 members</td>
<td>34</td>
<td>55,8</td>
<td>25</td>
<td>34,2</td>
</tr>
<tr>
<td>Groups with members between 4 and 6</td>
<td>24</td>
<td>39,3</td>
<td>37</td>
<td>50,7</td>
</tr>
<tr>
<td>Groups with members between 7 and 9</td>
<td>3</td>
<td>4,9</td>
<td>9</td>
<td>12,3</td>
</tr>
<tr>
<td>Groups with more than 9 members</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>2,8</td>
</tr>
<tr>
<td>nd</td>
<td>8</td>
<td>-</td>
<td>6</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>69</td>
<td>100</td>
<td>79</td>
<td>100</td>
</tr>
</tbody>
</table>

We estimated the relationship between the numerousness of groups and the constitution of a new company (table 1.4) that showed a strong correlation of the two variables.

Even if there is a larger probability of success especially in correspondence of groups formed by 4 to 6 people, the correlation is 0,866781, that result consistent with the hypothesis (graph.1.1).

Table 1.4 – Correlation between groups numerousness and outcome in terms of constitution of a Newco

<table>
<thead>
<tr>
<th>Numbers of groups members</th>
<th>Aspiring entrepreneurs groups</th>
<th>Groups NCC</th>
<th>% of success</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>22</td>
<td>4</td>
<td>18,18%</td>
</tr>
<tr>
<td>3</td>
<td>44</td>
<td>15</td>
<td>34,09%</td>
</tr>
<tr>
<td>4</td>
<td>57</td>
<td>22</td>
<td>38,60%</td>
</tr>
<tr>
<td>5</td>
<td>21</td>
<td>7</td>
<td>33,33%</td>
</tr>
<tr>
<td>6</td>
<td>27</td>
<td>15</td>
<td>55,56%</td>
</tr>
<tr>
<td>7</td>
<td>11</td>
<td>7</td>
<td>63,64%</td>
</tr>
<tr>
<td>8</td>
<td>5</td>
<td>4</td>
<td>80,00%</td>
</tr>
<tr>
<td>9</td>
<td>1</td>
<td>0</td>
<td>0,00%</td>
</tr>
<tr>
<td>10</td>
<td>0</td>
<td>0</td>
<td>0,00%</td>
</tr>
<tr>
<td>11</td>
<td>0</td>
<td>0</td>
<td>0,00%</td>
</tr>
<tr>
<td>12</td>
<td>2</td>
<td>2</td>
<td>100,00%</td>
</tr>
</tbody>
</table>

Then we run a simple regression to estimate the probability of constitution connected to the independent variable “numerousness of group” (table 1.5).

Increasing the number of members that form an aspiring entrepreneurial group, increases as well the chance of constitution of a new venture ( $R^2 = 0,0795234$ ).
Graph- 1.1 – Correlation between groups numerousness and outcome in terms of a Newco constitution

Table 1.5 – Regression result of groups numerousness and constitution of a new company

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>const</td>
<td>0.056375</td>
<td>0.0918966</td>
<td>0.6135</td>
<td>0.540313</td>
</tr>
<tr>
<td>Numerousness of group members</td>
<td>0.0795234</td>
<td>0.0197322</td>
<td>4.0301</td>
<td>0.000081 ***</td>
</tr>
</tbody>
</table>

Groups that decided to quit, deriving to problems arisen between members during the business idea development period, were formed by a mean of 4.32 members. Even if the first explanation agreed to what the literature on group’s management states on the difficulties to run team too large, we can affirm that it is not the case. Thus, if we compare the composition of the whole universe made by the 190 groups taking part to the Spinner Programme, to the 25 groups that decided to not constitute a new company depending on difficulties arisen between different members, it is clear that the distribution in terms of numbers of members, has the same trend (table 1.6). This result could be consistent with some cluster of researchers that state that group’s numerousness has less effect on performance than the team process interactions (Chowdhury, 2005). Opening the box and analyzing the 25 groups, we found that only the 32% of them were homogeneous in competences. It could be an explanation of the difficulties in communication mechanisms that arisen when the educational background and fields of experiences are different. This result contrasts, as we show later on, with
our hypothesis on homogeneity of background and field of competences as a cause for not constitution.

Table 1.6 – Comparison of the universe of groups taking part to Spinner Programme and the groups who decided to quit deriving on difficulties arisen between members by number of members

<table>
<thead>
<tr>
<th>Groups by number of members</th>
<th>% of the whole universe of groups</th>
<th>% of the 25 groups that quit for problems between members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Groups with less than 4 members</td>
<td>31</td>
<td>28</td>
</tr>
<tr>
<td>Groups with members between 4 and 6</td>
<td>57</td>
<td>60</td>
</tr>
<tr>
<td>Groups with members between 7 and 9</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td>Groups with more than 9 members</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Only the 15% of the 79 companies that were created have in the corporate mostly or entirely female members while the highest tendency of setting up newco is shown by teams totally or mostly formed by male members (table 1.7).

Table 1.7 – Groups by gender composition of members and outcome in terms of constitution of a Newco

<table>
<thead>
<tr>
<th>Numbers of groups</th>
<th>Groups (NCC)</th>
<th>Groups (NCNC)</th>
<th>Groups in stand by</th>
</tr>
</thead>
<tbody>
<tr>
<td>Groups totally made by male</td>
<td>55</td>
<td>30 (54,5%)</td>
<td>17 (30,9%)</td>
</tr>
<tr>
<td>Groups mostly made by male</td>
<td>74</td>
<td>30 (40,5%)</td>
<td>27 (36,5%)</td>
</tr>
<tr>
<td>Groups equally made by male and female</td>
<td>26</td>
<td>7 (26,9%)</td>
<td>12 (46,2%)</td>
</tr>
<tr>
<td>Groups mostly made by female</td>
<td>23</td>
<td>9 (39,1%)</td>
<td>7 (30,4%)</td>
</tr>
<tr>
<td>Groups totally made by female</td>
<td>12</td>
<td>3 (25,0%)</td>
<td>6 (50%)</td>
</tr>
</tbody>
</table>

Considering the second hypothesis on the work status of all the members we can observe that there is no difference in decision to set up a new company between groups with different prevalence in employed or unemployed work status. Never less it is interesting to notice that all the four groups that were formed by members that already have got a job decided to constitute, while more than half of the 37 groups that were formed by persons that don’t have a job decided to quit (46%) or are still in stand by (16,2%). This result enlighten the fact that being part of the group someone who already worked had simplified the transformation process of the idea in a real business.
Relate to the education level of the group’s members, it is interesting to notice that, at the first sight, the tendency to set up a company is more present in those groups that have the highest education degree. In fact, the 70% of the 33 groups we mapped having the highest percentage in education level decide to constitute a new company (table 1.8).

Table 1.8 – Groups by educational level of members and outcome in terms of constitution of a Newco

| Groups with very high educational level | Numbers of groups | Groups (NCC) 19 (57,5%) | Groups (NCNC) 7 (21,2%) | Groups in stand by 7 (21,2%) |
| Groups with high educational level | 63 | 25 (39,7%) | 24 (38,1%) | 14 (22,2%) |
| Groups with educational level on average | 75 | 26 (34,7%) | 30 (40%) | 19 (25,3) |
| Groups with low educational level | 19 | 9 (47,4%) | 8 (42,1%) | 2 (10,5%) |
| Total | 190 | 79 | 69 | 42 |

The 24% of the total number of firms that were set up after the Spinner Project come from groups with the higher education that, however, represent the segment with less than 6% of the total population.

However, running a logit regression using as dependent variable “constitution”, the result is not consisting with the second hypothesis (McFadden R² = 0,00859663) (table 1.9).

Table 1.9 – Logit regression of education level in groups and constitution of a new company excluding observation for “High level” of education

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t statistic</th>
<th>Slop Media*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Const.</td>
<td>-0,552069</td>
<td>0,287984</td>
<td>-1,9170</td>
<td></td>
</tr>
<tr>
<td>Very High</td>
<td>0,351398</td>
<td>0,387653</td>
<td>0,9065</td>
<td>0,084621</td>
</tr>
<tr>
<td>Medium</td>
<td>-0,107177</td>
<td>0,42905</td>
<td>-0,2498</td>
<td>-0,0258096</td>
</tr>
<tr>
<td>Low</td>
<td>0,434286</td>
<td>0,448319</td>
<td>0,9687</td>
<td>0,104581</td>
</tr>
</tbody>
</table>

Focusing on skills that characterized the different teams, we grouped them depending on how prevalent were the heterogeneity or homogeneity of member’s field of competences in each single group of aspiring entrepreneurs. As the table 1.10 shows, and as confirmed by the regression model we use to test it, there is no effect on constitution of independent variable “heterogeneity”.
Table 1.10 – Groups by incidence of category of skills and constitution of a new company

<table>
<thead>
<tr>
<th>SKILLS</th>
<th>Groups (NCC)</th>
<th></th>
<th>Groups (NCNC)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>a.v.</td>
<td>%</td>
<td>a.v.</td>
<td>%</td>
</tr>
<tr>
<td>Groups homogeneous in competences</td>
<td>45</td>
<td>57%</td>
<td>40</td>
<td>58%</td>
</tr>
<tr>
<td>Groups heterogeneous in competences</td>
<td>34</td>
<td>43%</td>
<td>29</td>
<td>42%</td>
</tr>
</tbody>
</table>

Table 1.11 – Regression of homogenization of groups members competences and constitution of a new company

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>const</td>
<td>4,39244</td>
<td>0,180568</td>
<td>24,3257</td>
<td>&lt; 0,00001 ***</td>
</tr>
<tr>
<td>homogeneous</td>
<td>-1,0122</td>
<td>0,235988</td>
<td>-4,2892</td>
<td>0,000029 ***</td>
</tr>
<tr>
<td>constitution</td>
<td>0,781775</td>
<td>0,237268</td>
<td>3,2949</td>
<td>0,001180 ***</td>
</tr>
</tbody>
</table>

This result conflicts with all the researches that consider important groups’ differences in terms of education, background and competences.

We hypnotized that the dynamic of the group changeability in terms of leaving and coming of members from the original entrepreneurs team has a moderator effect in the company constitution. If we compare the processes of groups that set up a company and groups that decided to quit it is possible to enlighten different dynamics. The NCC groups are characterized by an high dynamicity. The 64% of original teams, in fact, changes its assets. In particular the 35% increases the number of its members whereas the 65% reduces it (table 1.13). On the other hand, NCNC group’s structures changed less (only 36%) and we can observe that only the 9% of team that decided to quit increased the number of its members. The dynamicity of group’s members in terms of stepping in and out of the first group of aspiring entrepreneurs, positively effects the creation of the new company. This situation enlighten an emergent problem of NCNC groups that loose members during the constitution process and are not able to substitute them with new knowledge. In those cases are sapped the collective mind of the groups and those caused problems in redefining the learning and acting procedures.
Table 1.12 – Evolution of groups by number of members and outcome in terms of Newco

<table>
<thead>
<tr>
<th></th>
<th>Number of group’s members at T0</th>
<th>Number of group’s members at T1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NCC</td>
<td>%</td>
</tr>
<tr>
<td>Groups with less than 4 members</td>
<td>19</td>
<td>24,0</td>
</tr>
<tr>
<td>Groups with members between 4 and 6</td>
<td>46</td>
<td>58,3</td>
</tr>
<tr>
<td>Groups with members between 7 and 9</td>
<td>12</td>
<td>15,2</td>
</tr>
<tr>
<td>Groups with more than 9 members</td>
<td>2</td>
<td>2,5</td>
</tr>
<tr>
<td>Not available</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>79</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 1.13 – Structure evolution of groups composition

<table>
<thead>
<tr>
<th></th>
<th>Gruppi CI</th>
<th>Gruppi NCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of groups that modified members number:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- (% of which increased the number</td>
<td>64%</td>
<td>36%</td>
</tr>
<tr>
<td>- (% of which decreased the number</td>
<td>35%</td>
<td>9%</td>
</tr>
</tbody>
</table>

The dynamicity of NCC is higher than data show because in the 16% of groups there were members leaving and entering the structure at the same time, not modifying the total composition number but the composition of knowledge and experience of people who form it and in this way, compelling the group to change its routines and its stable awareness. It is interesting to notice the case of the four groups in which there was the same number of leaving and entrance in the structure of the original team. All of them at the end of the Spinner Programme (after one year) decided to set up a new company. The change in the original group structure increase the unhomogeneity in the competences and skills and in 2 cases one of the new members was a financial institution while a team received an enterprise as partner.

1.5 Conclusions

A first conclusion we can state is that, under the same conditions of policy support and context there is no particular factor related to the team that can increase the chances of a group to create a
new business. There are only two consistent result with the hypothesis we stated that are first of all that the more the group is numerous, the more increase the chance of constitution; second that group more dynamic in changing their structure in the pre-start up phase have more chances to constitute because they are more active in searching new better asset to fit.

Comparing groups that set up a new company and those who decided to give up the research identifies very few differences. This conclusion enlighten that the phenomenon of innovative firm creation has a complex and multidimensional nature and many are the variables to take in to account.

Combining individuals with different attitudes creates variety and, at the same time, enables the allocation of specific tasks based on personal attitudes, which in turn increases the tendency toward interaction and communication within the founding team. However our findings do not support the hypothesis that heterogeneity in competences and skills and educational level of group’s members has a positive effect on constitution.

Surprising is to find out that a large percentage of members already get a job. That is not an evident result because even if it is clear that a person who already work permanently can bring to the group its personal social network however, on the same time, its motivation and also the amount of time it can devote to the new business idea are probably lower.

Moreover, the present analysis focused on groups structure, enlightening the importance of having groups in which not only members owned different competences and educational level but that need to be supported in the difficult phase of pre-start up. Personalization of services range offered, appears to be a winning strategy to support aspiring entrepreneurs to go over the pre-start up face. It requires a really well organized and efficient structure of the actor that intend to play this role.

Using such a large longitudinal database makes more significant the result of the present research. Considering the results obtained by the Spinner Programme we can affirm that a clear policy of supporting innovative business company creation has substantial effects. 406 groups shaped by 1,468 persons applied to the Programme, 190 groups made by 800 were admitted and 79 groups set up 77 new companies. It made possible to sterilize the effect that context has on innovative companies creation because all the groups were located in a specific area, were selected using the same criteria and were able to access to equivalent services and facilities. It made possible to control the hypothesis on different creation process on those groups that have not established a new company.
1.6 Limitations and future research

The present paper is based on a research that used a very representative database. Nevertheless, the analysis has been influenced, at the same time, just by the requirements needed to apply for the Spinner Programme and the evaluation criteria it used. For example, offering grants to people that don’t have a job included in the programme, increased the presence of this kind of members in the aspiring entrepreneurs groups.

Moreover, one main rule adopted in the evaluation of applications was the correspondence between competences required to manage the future business company and that owned by the group that had the idea. This caused the homogenization of groups structure that in part made the sample uniform.

Further research could be conducted in different ways. First of all, would be interesting to investigate groups that are still in stand-by to enlarge the data-base and have more consistent result comparing the two groups that established and not a new innovative company. We are planning to conduct this analysis by the end of 2008.

Moreover, it seems interesting to monitor in two years the companies that were established both to verify the organization structure and their characteristics in a growing phase, and to examine their performances. It could be an interesting data-base to test results of other researches that state that the numerousness of members have a negative effect on company evolution.
References


Chowdhury S. (2005), Demographic diversity for building an effective entrepreneurial team: is it important? Journal of Business Venturing 20, 727–746


