Abstract

In this paper we examine the association between the organization and the mode of financing of entrepreneurial ventures. By means of a mixed-method study, we show that after receiving outside equity from professional investors, entrepreneurial ventures’ top management teams becomes larger and more specialized. The presence of outside equity investors also influences the extent of the delegation of decision authority within the team. However, this effect varies depending on the type of investors. When ventures are backed by corporate investors, the level of delegation increases. By contrast, when ventures receive outside equity investors from independent venture capital investors, they tend to centralize authority over key strategic decisions in management committees. This organizational arrangement is instrumental to the wish of the outside investors to exercise greater control over these decisions.
ORGANIZATION AND FINANCE OF ENTREPRENEURIAL VENTURES:
LOOKING BEYOND THE SURFACE

Abstract: In this paper we examine the association between the organization and the mode of financing of entrepreneurial ventures. By means of a mixed-method study, we show that after receiving outside equity from professional investors, entrepreneurial ventures’ top management teams becomes larger and more specialized. The presence of outside equity investors also influences the extent of the delegation of decision authority within the team. However, this effect varies depending on the type of investors. When ventures are backed by corporate investors, the level of delegation increases. By contrast, when ventures receive outside equity investors from independent venture capital investors, they tend to centralize authority over key strategic decisions in management committees. This organizational arrangement is instrumental to the wish of the outside investors to exercise greater control over these decisions.

Keywords: Entrepreneurial ventures, organizational design, delegation, specialization, equity investment, financial structure
INTRODUCTION

Prior studies that have examined the link between the organization of entrepreneurial ventures (hereafter: EVs)¹ and their performance provide support to the idea that professionalized organizations, i.e. those that mimic the organizational of successful incumbent firms, achieve better performances (Caruana, Morris and Vella, 1998; Cosh, Fu, and Hughes, 2012; Meijard, Brand, and Mosselman, 2005; Sine, Mitsuhashi, and Kirsch, 2006; Talaulicar, Grundei, and Werder, 2005). Among the many benefits for EVs to pursue a professional organizations, an interesting result relates to the association between a professional organizational design and the presence of outside equity investors (Beckman and Burton, 2008). Accordingly, EVs able to deviate from a standard evolutionary path (Hellman and Puri, 2002), and endowed with more complete organizational structures since the early stages of their lifecycle, are likely to obtain venture capital more quickly (Beckman and Burton, 2008) and secure EV’s future success (Wasserman, 2003).

Despite this initial evidence, our understanding of this topic is far from being complete and a number of questions remain open. Prior studies on the association between adopting a professional organization and the presence of outside equity investors have disregarded many EVs organizational elements, which have been proven to be important for large firms (e.g., hierarchy, allocation of decision authority). As a result, our knowledge on both EVs’ organizational design and its relation with the attraction of equity financing remains fragmented. Moreover, previous contributions have not provided conclusive evidence on the nature of this relation, whose mechanisms remain unclear. Specifically, two

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¹ An entrepreneurial venture is a young owner-managed firm that is established by one entrepreneur (or a group of entrepreneurs) who “perceive an opportunity, and creates an organization to pursue it” (Bygrave and Hofer, 1991).
concurring dynamics are in play (Beckman and Burton, 2008). On the one hand, one can argue that EVs adopt a more professional organization of their operations to improve their performance. In this way they gain legitimacy among external stakeholders (e.g., Überbacher, 2014; Zimmerman and Zeits, 2002) and become more attractive to outside equity investors (Baum and Silverman, 2004). Following this line of reasoning, the relation between having a professional organization and receiving equity financing would be driven by the fact that equity investors select ex ante EVs with a professional organization. On the other hand, it may also be that the changes in EVs’ organization are triggered by the external investor in the aftermath of the investment. This view relies on the idea that most EVs lack the managerial competencies to address organizational challenges and thus they resort to the “coaching” by professional outside equity investors (e.g., Gorman and Sahlman, 1989; Kaplan and Strömberg, 2004; Lerner, 1995; Sapienza and Timmons, 1989). This coaching may extend to organizational design elements, thus inducing EVs to adopt a professional organization (Hellmann and Puri, 2002; Colombo and Grilli, 2013). In line with this view, the changes in EVs’ organization occur ex-post. Finally, current research has not considered the type of outside equity investor in understanding the relation between EVs’ organization designs and equity financing. Most of what we know about the organizational impact of outside equity investments relate to independent VC investors. However, the entrepreneurial finance literature has highlighted that outside equity investors differ along several dimensions (e.g., Pollock et al., 2009, Dimov and Gedajlovic, 2010), and have different objectives and competencies (Dushnitsky and Lenox, 2006). Hence, one can argue that the relation between EVs’ organizational design and the reception of equity financing may vary depending on the type of investors (independent VC vs. corporate investors). If this holds true, considering together corporate and independent VC may provide a distorted
interpretation, which takes us away from a comprehensive and precise picture of the phenomenon.

The aim of this paper is to contribute to fill this gap in order to gain a more comprehensive understanding of the mutual relation between the organization of EVs and the presence of outside investors in their equity capital. To this end, we aim at answering the following research questions: (i) Does EVs’ organization change depending on the presence of outside equity investors? (ii) Which are the dynamics and the underlying mechanisms leading to such differences? (iii) Do EVs’ organization and the dynamics that lead to such differences vary when considering the type of investors (notably, corporate investors vs. independent VCs)?

To address these research questions, we resort to a mixed-methods approach. First, we conduct a survey to collect fine-grained data on the several dimensions of the organization of 255 Italian EVs. Second, to gain additional insights into the mechanisms and the dynamics underling the relation between EVs’ organization and the presence of outside equity investors, we conduct a qualitative study, with a selected subsample of twelve survey’s respondents and their investors (see for a similar approach Edmondson, 1999). We found that there are significant differences in the organization of EVs depending on whether they are backed by external equity investors or not, and that these differences mainly emerge in the aftermath of the investment. Specifically, EVs that received outside equity investments have larger and more specialized TMTs and favor greater delegation of decision authority within the TMT. However, the qualitative analysis reveals that this latter holds true only for EVs backed by corporate investors. On the contrary, EVs backed by independent VCs tend to centralize decision authority over key strategic decisions in management committees. The qualitative analysis supports also the view that the
motivations and mechanisms underlying the changes in EVs’ organization vary depending on the type of investor. While corporate investors induce organizational changes with the main motivation of making the EVs more effective, for independent VCs the need of monitoring becomes central as well. Finally, we did not find any differences relating to the hierarchic structure of the TMT and the level of delegation of decision authority from the TMT to lower hierarchical levels neither when comparing EVs backed by external equity investors with the whole sample nor when considering the type of investors of EVs backed by external equity investors.

Our paper advances the literature in three major directions. First, we contribute to inform the limited and fragmented knowledge on EVs’ organization (see Colombo et al., 2016 for a review) by adopting a more comprehensive view that considers together several organizational design elements, namely: the size and the level of specialization of the Top Management Team (TMT), its hierarchic or polyarchic structure (i.e., whether one TMT member acts as the TMT’s leader), and the extent of delegation of authority over several strategic decisions, both within the TMT and from the TMT to lower hierarchical levels (i.e., to middle managers or individual employees. In so doing, our paper adds to the current debate on EVs’ organization by investigating EVs’ hierarchy and allocation of decision authority, which have been disregarded so far. Second, the paper contributes to the literature on the alleged mutual relation between EVs’ organization and mode of financing, by uncovering its dynamics and underlying mechanisms. Third, the paper contributes to the entrepreneurial finance literature interested in comparing different type of investors, by showing that the changes in EVs’ organization and the dynamics that lead to these changes vary between corporate investors and independent VCs.
CONCEPTUAL BACKGROUND

Does the adoption of a professional organization make EVs more attractive to outside equity investors?

EVs may lever on their organization to be more attractive to outside equity investors. Adopting a more professional organization, EVs are indeed able to gain both substantive benefits in delivering value to customers (e.g., Caruana et al., 1998; Cosh, et al., 2012; Meijarard et al., 2005; Sine et al., 2006; Talaulicar et al, 2005) and legitimacy among external constituents (e.g., Überbacher, 2014; Zimmerman and Zeits, 2002).

The limited literature on the organizational design of EVs supports the view that EVs that adopt a more professional organization achieve superior performance. Elements that compose a professional organization include a larger TMT, a greater functional specialization of TMT members, and a greater level of delegation of decision authority to the TMT members in charge of the different functional areas. In accordance with this view, Sine et al. (2006) show that the functional specialization, role formalization and relative size of the TMT (i.e., the ratio of the number of TMT members to the number of employees) positively influence EV’s revenues. Greater functional specialization also results in greater speed and comprehensiveness of decision-making. A similar effect arises when the TMT is hierarchically structured, with one TMT member acting as the “leader” and deciding firm’s strategy, but only if there is high trust among TMT members (Talaulicar, Grundei, and Werder, 2005). Moreover, when EVs (and more generally small firms) increase the level of delegation of decision authority, they are better able to capture business opportunities (Caruana, Morris, and Vella, 1998) and perform better (Cosh et al., 2012; Meijarard et al., 2005).
Indeed, this professional organization allows TMT members to concentrate attention and effort on different specific functional areas, thus generating several advantages: i) TMT members can exploit their specialized functional knowledge (Hayek, 1945; Jensen and Meckling, 1992) and accumulate new knowledge over time, thus becoming functional experts; ii) loss of information problems that may arise from transferring information upward and downward the corporate hierarchy are reduced (Dessein, 2002); iii) information overload problems are also reduced (Garicano, 2000; Garicano and Rossi-Hansberg, 2006; Harris and Raviv, 2005), thus freeing time that TMT members can use for key strategic decisions; and iv) the delays in information processing typical of a centralized and unspecialized TMT are avoided (Radner, 1993), as TMT members can make most decisions independently. To the extent that EVs that adopt a professional organization manage their operations more effectively, they also are more attractive to outside equity investors.

Besides improving performance, EVs may decide to organize themselves in a more professional way to achieve legitimacy. Legitimacy consists in “a social judgement of acceptance, appropriateness, and desirability” (Zimmerman and Zeits, 2002, p. 414). Typically, EVs do not appear accountable, and do not have established productive routines and strong ties with external stakeholders, hence they usually lack legitimacy (Zimmerman and Zeits, 2002). To create among external constituents the perception that they are legitimate (Delmar and Shane, 2004), EVs may lever on a professional organization, namely mimicking the organization of successful incumbent firms in their field (DeSantola and Gulati, 2017). In this respect, establishing a formalized hierarchical structure, specializing

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2 At the same time, the loss of control (Dessein, 2002) over the decisions made by TMT members independently is likely to be limited as they likely work for the same objective.
the TMT by functional areas and formalizing the role of TMT members help entrepreneurs
to convince external constituents of the viability of their firm and the appropriateness of its
actions. In turn, greater legitimacy makes it easier for EVs to attract external resources,
alleviating their liability of newness (Singh, Tucker, and House, 1986; Überbacher, 2014).
These resources clearly include equity capital provided by external investors.

**Does outside equity investors stimulate the adoption by EVs of a professional
organization?**

It is common knowledge in the entrepreneurial finance literature that VCs are “hands-on”
investors. In addition to financial resources, they actively monitor the EVs in which they
invest and “coach” them (Gorman and Sahlman, 1989; Kaplan and Strömberg, 2004; Lerner,
1995; Sapienza, 1992). According to Gorman and Sahlman (1989), VCs help portfolio EVs in
(i) obtaining additional financing from other sources, (ii) reviewing or formulating the
business strategy, and (iii) recruiting professional managers to be included in the TMT, with
the aim of expanding firm’s capabilities in areas where founders lack expertise.³

As to this latter point, studies dealing with founder’s succession have highlighted
that founder CEOs are often replaced by seasoned managers when VCs come on board
(Hellmann and Puri, 2002; Pollock et al., 2009; Wasserman, 2003). This move is instrumental
to removing the uncertainty about the untested execution capabilities of founder CEOs and
aligning the competencies of CEOs with the objective pursued by VCs to rapidly scale up EVs’
operations and extend their market reach, so as to make a successful exit more likely. It also
serves the purpose of signaling VCs’ good and active governance to other stakeholders.

³ A somehow similar coaching role is performed by business angels, who proactively contribute to shape EVs’ business model and strategy, help recruiting TMT members, and designing incentive systems and other human resource practices (Croce et al., 2017; Fili and Grunberg, 2016; Politis, 2008; Prowse, 1998).
A few other studies provide more direct evidence supporting the view that VCs proactively shape the organization of their portfolio ventures, stimulating the adoption of a more professional organization. Hellmann and Puri (2002) show that VCs play an influential role in shaping the organizational structure and practices of the EVs they back. They also find that obtaining VC is associated with a substantial increase of the likelihood of hiring a vice-president for sales and marketing and adopting a stock option plan. Colombo and Grilli (2013) focus on the vertical depth of EVs’ organization and highlight that VC-backed companies more rapidly hire a salaried manager than their non-VC-backed counterparts, switching from a two layered organization to a three layered one.

QUANTITATIVE ANALYSIS

Data collection

To investigate differences in the organization of EVs with and without outside equity investments from professional investors we used a convenient sample of Italian EVs. Sample firms were founded by graduates from Politecnico di Milano, the largest Italian technical university. Data on the organization of sample firms were collected through an online survey administered in the second semester 2015, while information on outside equity investments was retrieved from the AIDA commercial database.

The target of the survey was the population of 1,889 firms that were founded between 2004 and 2010 by one or more individuals who graduated from Politecnico di Milano between 2002 and 2010, were located in Italy and survived as independent firms until December 2014 (i.e. at December 2014, these firms were 10 year old or younger).

4 http://aida.bvdinfo.com. Aida is a database provided by Bureau van Dijk (BvD) that contains information and balance sheets of all the Italian firms.
Focus on this target population allowed to obtain a good response rate for the survey (e.g., Kriauciunas, Parmigiani and Rivera-Santos, 2011) and helped to reduce the risk that differences in EVs’ organization were driven by the different level of human capital of founders (e.g., Colombo and Grilli, 2005) or different entrepreneurial cultures conveyed by different universities (Jacob, Lundqvist, and Hellsmark, 2003). In order to administer the survey, we searched for the personal email and/or telephone contact of one of the owner-managers of the target firms. Finally, the survey was administered to a target population of 1,075 entrepreneurs from as many EVs.

The questionnaire included several questions on the organization of EVs. In particular, we considered the following aspects: i) the size, functional specialization and hierarchic versus polyarchic structure of EVs’ TMTs; ii) the allocation of decision authority over a set of strategic decisions (list reported in the Appendix), describing who is responsible for the decision and how the decision is typically made (by an individual in isolation or as the outcome of discussion within the TMT); (iii) entrepreneurs’ individual characteristics (e.g., gender, role and tenure), and (iv) firm-specific characteristics (e.g., whether the firm is family owned). In April 2015, we did a pilot-test asking to five entrepreneurs, who did not work in the EVs included in the target population, to answer to the questionnaire and give feedback on its comprehensiveness. Then, a new version of the questionnaire was pre-tested by a sample of 100 EVs randomly extracted from the target population.

The final version of the questionnaire was then administered between June and December 2015. EVs in the target population were contacted by trained research assistants through a phone call, followed by an email containing the link to access the online questionnaire on SurveyMonkey. For each questionnaire received, answers were checked
for internal coherence and, if needed, missing data were recovered and mistakes corrected through an additional phone call. At the end of the survey, we obtained a total of 255 filled questionnaires with no missing data, corresponding to a 24.09% response rate.

We performed additional checks to control for the reliability of data, the representativeness of the usable sample, and the possible presence of non-response biases. First, we checked the reliability of answers comparing them with those provided by a second respondent in the EV, using t-tests and Kolmogorov-Smirnov tests for equality of distribution functions for continuous variables, and chi-tests for categorical variables. Analyses over a sample of 24 pairs of questionnaires revealed no significant differences over the organizational design elements considered in this study, thus confirming their reliability.

Second, we checked whether the sample of 255 EVs is representative of the target population of 1,075 EVs. Also in this case we used t-tests, Kolmogorov-Smirnov tests for equality of distribution functions, and chi-tests. We found that the sample has the same distribution of the target population with respect to the size of the EVs (measured by sales in 2015, t-test = 0.518, p-value = 0.605), their year of founding ($\chi^2(9) = 1.142, p$-value = 0.285), the geographical area where EVs are located ($\chi^2(4) = 5.808, p$-value = 0.214) and the industry in which they operate ($\chi^2(3) = 2.661, p$-value = 0.447).\(^5\) We also checked that there are no significant differences between early and late respondents\(^6\) as for the variables considered in this study about EVs’ organization and means of financing.\(^7\)

The majority of the 255 EVs of our study is located in the North of Italy (93.7%), with the 48.6% of them in the Milan province. Most of the EVs operate in the service industry

\(^5\) We considered 3 geographical areas: North, Center, and South of Italy, and 4 industries: manufacturing, services, agriculture, and constructions.

\(^6\) Early respondents are entrepreneurs that answered after the initial phone call and related email; late respondents are instead those that answered after at least one email reminder.

\(^7\) Results of all the tests are available from the authors upon request.
(75.7%), while only the 14.1% in the manufacturing one. In the majority of the cases, EVs were founded by a team of entrepreneurs (64.7%), while in 35.3% of the EVs there is a single owner. On average, sample EVs are 4.3 years old, with average sales of 889,777k€.

**Variables and method**

To analyze EVs’ organization and its relation to the presence of outside investors in the equity capital of EVs, we took advantage of data both collected through the survey described above and retrieved from secondary sources (i.e., the AIDA database).

We used survey data to create the five variables defining EVs’ organization: (i) *TMT’s size*, (ii) *TMT’s functional specialization*, (iii) *TMT’s hierarchical structure*, (iv) *intra-TMT delegation*, and (v) *extra-TMT delegation*. *TMT’s size* refers to the number of executives in the EV’s TMT (Sine et al., 2006). Functional specialization generally refers to the division of labor within an organization (Pugh et al., 1968, p. 301). Accordingly, *TMT’s functional specialization* measures the extent to which the activities concerning the different functional areas in the EV are concentrated in the hands of one (or few) managers instead of being spread across all executives. For this purpose, we took inspiration from Sine et al. (2006) and we computed *TMT’s functional specialization* as the average number of functional assignments per executive in the TMT. In so doing, we considered the following 9 functional areas: administration and finance, communication and public relations, human resources, R&D, purchasing, production, marketing and sales, operations, and strategy development. For each functional area, the respondent to the survey questionnaire indicated the responsible manager(s). *TMT’s functional specialization* is equal to $10 - \frac{\sum_{m=1}^{M} s_m}{M}$, where $M$ is the size of the TMT, $m$ is the specific executive in the team, and $s_m$ is the number of functional areas assigned to the $m$ manager. Therefore, the minimum level of functional specialization is 1 (i.e., when there is just one top manager dealing with all
functional areas, the variable assumes a value equal to \(10 - \frac{\sum_{n=1}^{9} 1}{9}\), while the maximum allowed is 9 (i.e., when there are 9 managers, each of them dealing with a single functional area, the variable assumes a value equal to \(10 - \frac{\sum_{n=1}^{9} 1}{9}\)). The third organizational variable refers to whether the TMT has a hierarchic or polyarchic structure. Specifically, *hierarchical TMT* is a dummy variable equal to 1 in case it is possible to identify an entrepreneur who is leading the TMT (and the EV), being the ultimate responsible for its strategy, 0 otherwise. Finally, the last two variables refer to the allocation of authority over a set of 17 strategic decisions, meaning whether decision authority is centralized or delegated downward the organizational hierarchy (Aghion and Tirole, 1997; Hempel, Zhang and Han, 2012; Lin and Germain, 2003). In this respect, a distinction can be made between the allocation of decision authority within the TMT, and thus among top executives (i.e., *intra-TMT delegation*), and the allocation of decision authority from the TMT to lower hierarchical levels (i.e., *extra-TMT delegation*). Indeed, in the former case, while remaining at the apex of the EV, a decision may be centralized at the top (i.e., made by the entrepreneur that leads the EV, in case of a hierarchical TMT, or together by all executives, in case of a polyarchic TMT) or delegated to a specific member of the TMT. However, not always authority resides within the TMT, but it may be delegated by the TMT to lower levels of the EV. For the 17 strategic decisions covered by the questionnaire\(^8\), respondents were asked to indicate who in the EV was responsible for making each decision. For example, in case the EV has a CEO at the top of the hierarchy, five hierarchical levels (and levels of delegation) were defined: 1 = the CEO makes the decision; 2 = a member of the TMT makes the decision, but the approval of the CEO is needed; 3 = a member of the TMT makes the

\[^8\] The list of strategic decisions is reported in Appendix A.
decision autonomously; 4 = an EV’s employee or middle manager makes the decision but the approval of a top manager in needed; 5 = an EV’s employee or middle manager makes the decision autonomously. *Intra-TMT delegation* is the average level of delegation considering only the decisions made within the TMT (i.e., in the example above, decisions for which the respondent gave value 1, 2, or 3 to the corresponding question), while *extra-TMT delegation* is the average level of delegation considering all the decisions, but changing their relative value. Specifically, the decisions made within the TMT were aggregated at the same lowest level of delegation: considering the example above, values 1, 2 and 3 are associated to a level of *extra-TMT delegation* equal to 1, value 4 to a level of 2, and value 5 to a level of delegation of 3.

The sixth variable considered in the quantitative part of this study refers to the presence of outside investors in the equity capital of sample firms. In this case, data were retrieved from the AIDA database. To compare the presence of outside equity investments with other means of financing, we also created a categorical variable distinguishing EVs financed through (i) outside equity, (ii) financial debt, but no outside equity, and (iii) bootstrapping. Table 1 provides descriptive statistics relating to the key variables considered in this study and the correlation matrix.

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The aim of the quantitative analysis was to detect the existence of systematic differences in the organizational design elements defined above between EVs with and without outside equity investments. For this purpose, we resorted to simple descriptive statistics, notably the Kolmogorov-Smirnov equality of distributions tests\(^9\) (for the

\(^9\)We used this test instead of t-test due to the limited size of the sample of EVs’ with outside equity investments.
continuous variables, i.e., \textit{TMT’s size, TMT’s functional specialization, intra-TMT delegation,}
and \textit{extra-TMT delegation}), chi-tests (for the dummy variable, i.e., \textit{hierarchical TMT}), and
one-way analysis of variance (ANOVA) tests and Sheffe post-hoc test (to compare EVs’
organization distinguishing among alternative means of financing).

\textbf{Evidence from the quantitative study}

EVs in the sample are managed by an average of 2.33 top executives, who constitute the TMT. These managers typically handle more than one functional area in the EV, and the average level of TMT’s specialization is 3.50. Coherently with the literature (e.g., Child, 1973; Pugh et al., 1969), the correlation between the size of the TMT and its managers’ specialization is positive and significant. In 63.1\% of the EVs, the TMT has a hierarchical structure, with one of the top executive acting as the EV’s leader. Finally, the mean of \textit{Intra-TMT delegation} is 1.42 and the one of \textit{Extra-TMT delegation} is 1.13. This means that the majority of the strategic decisions are taken within the TMT, while delegation to lower levels of the EV is extremely infrequent (i.e., low \textit{extra-TMT delegation}). The decisions that are relatively more frequently delegated by the TMT to lower hierarchical levels relate to purchases (selection of suppliers, 1.23), changes in organizational processes and procedures (1.20), and investments in ICT (1.19). When decision authority is centralized at the TMT-level, either the entrepreneur who leads the EV decides autonomously (in case of hierarchical TMTs) or the TMT discusses and decides together (in case of polyarchic TMTs); again it is quite unlikely that top managers decide autonomously (i.e., low \textit{intra-MT delegation}). The decisions that are relatively more likely to be delegated to individual top managers relate to purchases (1.68), the design of management control systems (1.66), production insourcing/outsourcing (1.57), and the introduction of significant changes in products and/or services (1.56) and in marketing activities (1.56). Contrarily, decisions that
are more frequently centralized at the top of the hierarchical pyramid relate to major business investments (1.21), significant changes in the organizational structure (1.31), and hiring and firing (1.34). Interestingly enough, *Intra-TMT delegation* is positively and significantly correlated with the size and the specialization of the TMT, being an important element of the “professionalization” of firm’s organization. This evidence suggests that delegation is instrumental to both protect the time of the entrepreneur (or group of entrepreneurs) who leads the EV from information overload (Garicano and Rossi-Hansberg, 2006; Harris and Raviv, 2005) and take full advantage of the specific knowledge developed by individual managers in specific functional activities (Jensen and Meckling, 1992). *Extra-TMT delegation* is instead negatively and significantly correlated with all the above dimensions, meaning that larger and specialized TMTs are likely able to make all fundamental decisions within the team, without further delegating decisions downward the corporate hierarchy. In this perspective, *Extra-TMT delegation* can be viewed as a surrogate for lack of *Intra-TMT delegation* in EVs where there are limited managerial resources within the TMT.

The last key dimension concerns the presence of outside equity investors. At the end of 2014, only 10.6% of sample EVs has received equity financing from external investors. Quite interestingly, in most cases (66%) the external investor is a corporation, which invests either directly or through a specialized vehicle (like a corporate venture capital subsidiary or a family investment office). Despite the low number of EVs with outside equity investors, their presence appears to be positively and significantly correlated with three of the organizational design elements described above: the size and the specialization of the TMT, and delegation within the TMT.

------- Insert here Table 2 -------
Table 2 presents the results of Kolmogorov-Smirnov equality of distributions tests and chi-tests comparing EVs’ organization depending on the presence or absence of outside equity investors. Significant statistical differences emerged for three of the five organizational design elements. EVs financed through outside equity investments exhibit greater size (p-value = 0.028) and level of specialization (p-value = 0.040) of the TMT. The level of delegation of decision authority within the TMT is also greater (p-value = 0.004). About the first element, the distribution of the TMT’s size is larger in EVs with outside equity investors than in those without outside equity investments; more in details, the average size of the TMT is 3.30 for the former and 2.22 for the latter. Similarly and coherently with the previous result (Child, 1973; Pugh et al., 1969), also the level of functional specialization in the TMT is greater in EVs with outside equity investors: the mean is 4.69 vs. 3.36 in EVs without outside equity. Coherently with the larger size and greater functional specialization, also the delegation of decision authority within the TMT is greater. Intra-TMT delegation is 1.60 in EVs with outside equity investments, while it is 1.40 in the remaining sample. Contrarily, we did not find any statistically significant difference considering the remaining two organizational design elements, i.e., the presence of a hierarchical structure in the TMT and the level of delegation from the TMT to lower hierarchical levels.

Finally, in order to gain a more comprehensive understanding of the link between EVs’ organization and means of financing, we further distinguished EVs’ that were not backed by outside equity investors depending on whether they used financial debt or resorted purely to bootstrapping to finance their operations. For this purpose we relied on one-way analysis of variance (ANOVA) tests and Sheffe post-hoc tests. Interestingly enough, results reported in Table 3 show that there are no statistical differences in EVs’ organization
comparing EVs financed through bootstrapping and financial debt (i.e., without outside equity finance). Instead, the TMTs of EVs with outside equity investments are larger (p-value = 0.000) and more specialized (p-value = 0.004) than those of EVs financed through either financial debt or bootstrapping. Intra-TMT delegation of decision authority in the former firms is significantly larger (p-value = 0.036) than the one of bootstrapping firms, while the difference with respect to EVs financed through financial debt (though positive) is not significant at conventional confidence levels.

QUALITATIVE ANALYSIS

Data collection
Considering our focus on a research topic at an intermediate state of development (Edmondson and McManus, 2007), we decided to complement the quantitative analysis with empirical evidence from a qualitative study (Merriam, 1998). This strategy allowed us to gather detailed information about the motivations, the mechanisms, and the dynamics underlying the association between the organization and the means of financing of EVs, taking into consideration the different type of the investors (see for a similar approach Edmondson, 1999).

We started the data collection in Summer 2016 with four non-structured interviews with 2 corporate investors and 2 independent VCs operating in the Italian entrepreneurial finance ecosystem. The main goal of these interviews was to understand whether equity investors value organizational design aspects before undertaking an investment decision and to grasp whether they induce organizational changes after their entry in the equity capital of the EV.
In a second phase, we collected original material from interviews with entrepreneurs. To this aim, we contacted all the respondents to our survey whose EV had attracted at least an outside equity investor within the previous five years. This strategy allowed us to minimize validity issues related to retrospective bias (Huber and Power, 1985), as the entry of the outside equity investor was still vivid in informant’s memory. We also included in the sample entrepreneurs whose EVs had not received any outside equity investment to create a comparison group with the aim of improving the generalizability of our results and reduce possible biases in interpretation caused by sample selection (Autio, George, and Alexy, 2011).

Initially the sample included eight entrepreneurs, of whom four had received at least an outside equity investment from corporate investors and/or independent VCs. Later, we added four more EVs to achieve theoretical saturation (Merriam, 1998). Information about the twelve informants are reported in Table 4.

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Beginning in Spring 2017, we contacted the owner-managers of these EVs who had responded to the survey by telephone or email. In parallel, we gathered secondary data on EVs’ history and performances from press articles, balance sheets, and ventures’ websites. During March-May 2017, we started conducting the semi-structured interviews with entrepreneurs. We chose this type of interviews to favor free expression of the entrepreneurs’ ideas and to facilitate comparison among information provided by different entrepreneurs (Bjørnholt and Farstad, 2012). Typically, two of the authors participated in

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10 For each group of EVs operating in the same industry, which received outside equity investments, we selected among the respondents of our survey another entrepreneur whose EV operated in the same industry but had not received any outside equity investment.

11 The questionnaire guide is available upon request to the corresponding author.
the interviews. When possible, we met the informants in their offices. However, occasionally we conducted interviews in our premises (1 case) or on Skype (3 cases). Interviews lasted between 15 minutes and 2 hours. During interviews, we asked entrepreneurs about the evolution of their EV from the foundation till recent days. In so doing, we asked entrepreneurs to focus on how and why they changed the organization of their venture over time. If the entrepreneurs indicated the outside equity investor among the reasons for organizational change, we asked additional questions on this specific topic. Additional non-directive questions were used to obtain further details when the entrepreneurs did not provide adequate answers. We systematically audio-recorded and then verbatim transcribed the interviews with entrepreneurs to facilitate the coding of documents.

To ensure construct validity and also account for retrospective bias, we triangulate the information provided by entrepreneurs using diverse information sources (Gibbert, Ruigrok, and Wicki, 2008). First, we conducted additional interviews with EVs’ outside equity investors. Second, we collected all the press articles related to the EVs covered by our study. Lastly, we had a final round of follow-up interviews with the entrepreneurs to clarify ambiguous or unclear statements. These follow up interviews took place from May 2017 to July 2017.

Overall, we gathered more than 10 hours of original interviews recordings, equivalent to about 45 pages of transcriptions. In addition, we gathered approximately 50 additional documents of non-original material (e.g., articles from magazines, press reviews, and scientific journals).

**Data analysis**
To avoid errors arising from halo effects and other interpretation biases (Strauss and Corbin, 1998), we initially analyzed separately the transcription of the interviews and we then discussed together the results. During discussion, we always involved at least an author not present at the interviews to include an unbiased interpretation of the material. We coded the collected data along two main dimensions. First, we coded information about EVs’ organizational design. In this respect we kept track of all references to variables considered in the quantitative part of our study: (i) TMT’s size, (ii) TMT’s functional specialization, (iii) TMT’s hierarchical structure, (iv) intra-TMT delegation, and (v) extra-TMT delegation. In so doing, we noted all the changes in EV’s organization, when they occurred and their motivations. Second, we looked at the presence of outside equity investors. When the EV received outside equity investments, we coded information about: (i) type of investor, (ii) investment’s timing, (iii) investment’s objectives, (iv) relation between investors and entrepreneurs before the investment, and (v) relation between investors and entrepreneurs after the investment.

At the end of this phase, we compared the codes we generated. When discrepancies in the interpretation of the material were detected, we discussed and clarified them, and, if necessary, we amended the codes. We took advantage of this analysis to gain familiarity with the cases and to understand the organizational changes undergone during the EV’s lifecycle. We also created for each EV a graphic representation, which described how each organizational design dimension changed since the foundation of the venture. Afterwards, we performed cross-case analysis to ensure external validity (Gibbert et al., 2008). During this phase we initially compared codes among different cases to assess consistency. Then, we separated our sample between EVs with and without outside equity investments and we looked for within-group similarities and inter-group differences (Eisenhardt, 1989). At this
stage, we took advantage of the representations created during the previous phase to
highlight whether differences exist in the evolution of EVs’ organization basing on the
reception of outside equity investments. In parallel, we also checked construct validity by
means of a continuous dialogue among authors and field experts. We continued this process
until discussions among authors and with informants revealed no apparent errors in the
interpretation of data.

Finally, we performed theory triangulation to enhance internal validity (Merriam,
1998). During this stage, we assessed similarities and differences between our findings and
existing theory and literature (Eisenhardt, 1989). When differences emerged, we looked at
neglected contingency factors and underlined explanations to reconcile apparently
divergent results.

Evidence from the qualitative study
In the following, we illustrate the evidence collected during the interviews on the mutual
links between EVs’ organization and means of financing. In particular, we highlight the role
played by outside equity investors in changing EVs’ organization after the investment. We
also show that these effects markedly differ depending on the type of investors and their
objectives. As to this latter aspect, we distinguish between independent VCs, which pursue
mainly financial objectives, thus aiming at realizing the largest possible capital gain in the
shortest possible period by successfully exiting the investment, and corporate investors,
which pursue strategic objectives in addition to financial objectives, thus opening a window
on a promising new technology, enlarging the portfolio of products or services, or getting
access to a key component, and being more patient.

First, from our interviews, we did not find any compelling evidence that outside
equity investors consider organizational design aspects when evaluating and selecting the
EVs to fund. None of the interviewed investors mentioned the organization of EVs as a fundamental driver in their investment decisions. Although the TMT was often mentioned as one important decision driver, investors’ primary focus was on either the complementary of skills or the trustful relationships among team members, and never on the current TMT’s organization. One of the partners of a well-known VC in the Italian market was very clear in this respect:

“What we look at is: a good idea, a strong technological basis, and high-skilled team able to develop the technology and execute the idea [...] It is one of our goals to empower the startups in our portfolio by adding high-profile managers who share a professional culture among the entrepreneurs”.

Coherent with this view, none of the interviewed entrepreneurs reported that before receiving an outside equity investment, they organized their EVs to be more appealing for investors. Of course, in spite of this evidence, we cannot refute that adopting a professional organization may result in better performances (Caruana, Morris and Vella, 1998), thereby indirectly attracting the interest of outside equity investors.

By contrast, the analysis of the cases revealed that outside equity investors promoted significant changes of EVs’ organization in the aftermath of the investment. A consistent pattern among all EVs related to an increase in TMT size. For instance, the TMT of Zeta expanded from two to three members, with the founder of this EV who credited the investor for this change (“he [the investor] added a new manager when he bought 30% of the company”). Gamma’s TMT increased from two to three members as well. Also in this case, the CEO stated that “the third manager arrived in 2015 [immediately after the outside equity investment]”.

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Investors’ primary aim was to enlarge the competencies of the TMT including individuals who had knowledge and competencies complementary to those of the former members of the team, so as to cover the full array of functional areas needed to the EV to effectively operate. The founder of Eta perfectly summarized this concept:

“The number of managers in the team started to increase. We added a manager who helped us with the internal organization, playing the roles of human resources and administrative directors, as none of us had the expertise to do that. We then also added a manager responsible for the body rental services. [...] It was the investor who suggested us to undertake these changes”.

Similarly, the founder of Beta claimed that:

“The investor added a new manager, responsible of the software development. This answered to the need to develop ad-hoc solutions for the HealthCare market we were not able to develop with the former team”.

This dynamic was also confirmed by equity investors. The associate partner of a VC fund in Italy clearly stated:

“We strongly believe in the necessity of flanking start-ups with mentors after the investment. [...] Our mentors are directly involved in the management of the start-ups in our portfolio and are a boost for their chances of success”.

Often, the new managers were experts on accounting and finance, with prior experiences in small and medium enterprises, but occasionally, as in the case of Beta, the investor add technical figures to the EV’s TMT as well.

In addition to complementing the competencies of TMT members, the inclusion of new managers in the TMT was reported to serve the purpose of making it easier for the
external investors to monitor the EV’s activities and influence their strategic decisions.

Indeed, the appointment in the TMT of a new manager, “loyal” to the outside equity investor, created a conduit that facilitated the flow of information (Brass, Galaskiewicz, Gree, and Tsai, 2004) between entrepreneurs and investors, and reduced information asymmetries and room from moral hazard. In accordance with this view, the CEO of Epsilon mentioned that the outside equity investor favored the increase of the number of managers in the TMT to have visibility over the activities of the EV and better monitor behavior of the former members of the TMT. Specifically, he says that:

“The growth in the team’s size was driven by the need of the investor to control and monitor, at least the most important strategic decisions”.

Similarly, the CEO of Zeta reported that the outside equity investor (an independent VC) insisted to include in the TMT a person who had a family relationship with the investor. This individual, in addition to taking responsibility for EV’s marketing and sales operations, was also a direct watchman for the outside equity investor and played a proactive role in the strategic decision making role. This situation was typical of EVs that received equity financing from independent VCs, while it was barely mentioned by entrepreneurs whose EVs were backed by corporate investors.

Considering all the above we can summarize:

**Proposition 1.** Outside equity investors promote the *increase of the size* of the TMT, with the inclusion of one or more managers with specific functional expertise. The main drivers of this dynamic are complementing the competencies of the TMT with the aim of making the EV more effective and monitoring the EVs after the investment. This latter driver appears stronger for independent VC compared to corporate investors.
Hand in hand with the increase in the number of members of the TMT, EVs’ level of functional specialization increased as well in the aftermath of the outside equity investment. The case of Delta, whose TMT’s functional specialization increased from 1 to 4.5, is illustrative:

“Before the investment, we both dealt with all the aspects of the venture. Now [after the investment], I manage trading and operations, while my colleague is specialized in development and commercial. Finally, the person [appointed by the investor] specialized in administration”.

Similarly, Eta’s functional specialization increased from 1 to 5. As reported by the founder:

“After the investor arrived, we were suggested to carve out our area of specialization. My colleagues specialized in the technical area, while I specialized in commercial activities. [...] Before the investment, everyone did everything”.

Former TMT members were incited to focus on those activities more in line with their background, knowledge and aptitudes, and to leave other functional areas (often accounting and finance or marketing) to newly recruited top managers, who were typically experts in these areas. The main rationale of this choice relied in the willingness of the equity investor to make the EV more effective by exploiting the expertise and competencies of TMT members. The case of Gamma is very informative in this respect:

“[Manager A] became the CEO one year after the intervention of the outside equity investor. We all agreed on giving [manager A] all the tasks typical of the CEO [...] as he had a natural aptitude to deal with these tasks”.

In some cases, entrepreneurs reported that the external investors acted as talent-scouts who are able to identify the latent qualities and bents of the TMT members.
Accordingly, outside equity investors helped former TMT members to change their tasks and focus on the activities they have a special aptitude for. Over time, these managers accumulated additional experience in the area that was under their responsibility, making the EV’s organization even more effective. Our informant from *Alfa* provided a telling example:

“I have a technical background. However, when the investor entered the company, he recognized that I was good in communication and commercial aspects. So, he suggested me to change my tasks and specialize in this area.

[...] It is my fourth year managing the commercial area, and now I feel a commercial guy”.

Given the above, we derive:

**Proposition 2.** Outside equity investors promote TMT’s functional specialization with the aim of making the EVs more effective. With the intervention of the investor, TMT members specialize according to their competences and prior experience. In some cases, specializations follow individuals’ latent qualities and hidden aptitudes identified and highlighted by the investor.

Another important organizational change implemented in EVs in the aftermath of an outside equity investments related to decision-making. In this respect, our interviews highlighted a notable difference between EVs backed by corporate investors and those that received equity capital from independent VCs. For the firsts, the level of delegation within the TMT systematically increased after the investment. While decisions that possibly change the destiny of the EV (such as major investments or exit from product and markets) were kept centralized at the top of firm’ hierarchy, TMT members in charge of specific functional
areas were given greater autonomy. This pattern was well described by the founder of Delta, who said about the changes suggested by the investor:

“I already worked in the trading and operations, thus I had enough experience to take decisions in these areas. [...] But if we have to make a strategic decision, I discuss with the other managers”.

Outside equity investors fostered this change to exploit the specific functional knowledge of TMT members, thus improving the quality of decisions (Hayek, 1945; Jensen and Meckling, 1992), and to timely solve the problems that arise in day-to-day activities, reducing information overload (Harris and Raviv, 2002). The increase in delegation of decision authority was especially apparent for decisions that do not generate substantial externalities beyond the pertinent functional area and individually have limited impact on firm’s bottom line (e.g., the corporate outside equity investor of Beta encouraged the increase in delegation of decision authority for decisions related to firm's products and services, selection of suppliers, hiring and firing decisions). The ultimate objective of this decision was to make EV's organization more responsive and effective. In accordance with the strategic objectives pursued by corporate investors, the benefit for the investor lied in the greater chances that the focal EV succeeds in developing a technology. This was confirmed by the CEO of Alfa who seemed to appreciate the possibility of focusing more on the development of the technology:

“In this way, we have the chance to focus on developing a working technology, rather than wasting time to decide who goes to the post office or to decide about other low value added activities”

In case the EV was backed by an independent VC, we did not observe a similar generalized increase in the level of delegation of decision authority. Instead, we detected
greater centralization of decisions at the top of the corporate hierarchy. This coupled with either the emergence of a *polyarchy* or the decoupling between the *formal* and *real* organization. In some cases, outside equity investors favored the emergence of a *polyarchic* TMT (Colombo et al., 2016), in which managers regularly met to make together strategic decisions. In this way, the outside equity investor had a direct influence on the decision-making process through the managers he appointed in the TMT. In other cases, the influence of outside equity investors on decision-making was so large that a decoupling between the *formal* and *real* organization (Gulati and Puranam, 2009) of the TMT emerged. In these cases, irrespective of the formal organization, the managers appointed by the outside equity investors exerted real authority over the key strategic decisions. This latter situation was likely when the outside equity investor had high bargaining power. Typical examples included cases where the outside investor owned a large share of EV’s equity capital, or was a crucial channel to access the complementary and valuable resources needed by the EV, or the investment contract included clauses that conferred special power to the investor. The founder of *Zeta* mentioned that although he was formally the CEO, a manager appointed by the outside equity investor - an independent VC that received a large share of the equity capital of *Zeta* in exchange for a substantial amount of money, was involved in all strategic decisions and had the final say, forcing the other TMT members to follow his advice. Specifically, he said:

“We had different objectives compared to those of the investor. At the end, we spent lot of time in trying to convince him that our decisions were good. However, it was the investor who has the final say”.

The choice of concentrating decision authority at the top of the hierarchy appears coherent with the view that for independent VCs closely exercising control over EVs’ activity
is fundamental, given their shorter-term focus and lower tolerance for failure (Chemmanur, Loutskina, and Tian, 2014), and the limited possibility to lever on different mechanisms of monitoring. Conversely, corporate investors with strategic objectives can rely on different mechanisms to collect information and monitor the activity of portfolio EVs, which are not available to financial investors. First, they have more opportunity to directly interact with the EVs, especially if the EVs use the laboratories or distribution channels of the investor to further develop their new technologies or delivering their products to customers (Chemmanur, et al. 2014). Second, it is not rare that EVs share the same distributors or suppliers with their strategic investors. Accordingly, the CEO of Beta mentioned that, once his EV received equity capital from a corporate investor, he immediately asked to be introduced to investors’ supplier of components. Interactions with these third parties have a twofold effect. On the one hand, they represent for investors an indirect source of information about the EV. On the other hand, they enable collective oversight and punishment of possible misbehaviors, thus discouraging entrepreneurs of the EV to indulge in opportunistic behavior. Again, these mechanisms are out of reach to financial investors, that are then forced to shape EV’s organization in a way that makes monitoring of its operations easier.

**Proposition 3.** Corporate equity investors promote intra-TMT delegation of decision authority for decision that do not generate substantial externalities beyond the pertinent functional area with the aim of making the EVs more effective. Instead, independent VCs favor greater centralization of decisions at the top of the corporate hierarchy with the aim of monitoring EVs after the investment.
Consistent with the data of our survey, none of our informants reported changes related to the hierarchic structure of the TMT and the level of delegation of decision authority from the TMT to lower hierarchical layers. Thus, we can exclude the absence of significant differences in the distribution of this two variables between EVs backed by external equity investors and EVs without equity funding was induced by different dynamics occurring for EVs backed by independent VC with respect to EVs backed by corporate investors.

Table 5 summarizes the main findings of the qualitative study. Both independent VCs and corporate investors entail an increase in TMT’s size and specialization, however these changes are leaded by different motivations. While for corporate investors the main trigger is to increase EVs effectiveness and thus performances, for independent VC the need of monitoring and controlling the EV played an important role as well. Driven by the same rationale, corporate and financial investors lead to different changes in the delegation of decision authority. Specifically, corporate investors favor greater delegation of decision authority within the TMT. On the contrary, EVs backed by independent VC tend to centralize authority over key strategic decisions in management committees.

--------- Insert here Table 5 -------

DISCUSSION AND CONCLUSIONS

In this paper we conducted a mixed methods study to examine the mutual links between the organization and the means of financing of EVs. By mean of a survey on a sample of 255 EVs, we showed that EVs that received funding from outside equity investors have on average: (i) a larger TMT, (ii) a more functionally specialized TMT, and (iii) a higher level of delegation of decision authority within the TMT. Interviewes with entrepreneurs and
investors indicate that these differences mainly emerged in the aftermath of the investment. Moreover, from the interviews noticeable differences emerged in association with the type of the equity investors and their objectives, i.e. corporate investors, which have (long-term) strategic objectives in addition to financial objectives, and independent VCs, which have (short-term) financial objectives. Corporate investors appoint new members to the TMT with the primary intent of complementing the skills possessed by the founders of the focal EV. New and old members of the TMT are incited to specialize in different functional areas and are given greater decision autonomy so as to make the best use of their knowledge and individual aptitudes. The ultimate objective of these organizational changes is to make EVs’ operations more effective. By contrast, when outside equity investors mainly have financial objectives, the organizational change triggered by their entry in the equity capital of the focal EV have an additional governance logic. They also serve the purpose of allowing the investor to exercise tight control over EV’s operations and influence key strategic decisions. The appointment of external managers who are loyal to the investor, the centralization of decision authority over key strategic decisions at the top of firm’s hierarchy, combined with the adoption of a polyarchic structure of the TMT or with the emergence of a real organization in which managers appointed by the investor have an influence on decision-making processes that goes far beyond their role in the formal organization, all serve this purpose.

Our study offers several contributions to the extant literature. First, this paper extends our knowledge about important and under-researched issues relating to the organization of EVs. These aspects include the hierarchic or polyarchic structure of TMTs, how strategic decisions are made and who is assigned decision authority both within the TMT and at lower hierarchical levels. Moreover, our qualitative analysis heeds the call of
Beckman and Burton (2008) that we do not know enough on how early organizational choices influence EVs’ evolution, including the attraction of external equity investors, and highlights the nexus of causality between the organization and modes of financing of EVs. Our results suggest that in line with the life-cycle view of EVs’ evolution, key organizational changes generally follow and are triggered by the advent of an outside equity investor.

Second, we add to the limited stream of literature that has examined the organizational impact of VC investments (Colombo and Grilli, 2013; Hellmann and Puri, 2002; Pollock, Fund and Baker, 2009; Wasserman, 2003), in that we consider organizational design dimensions related to the structure of TMTs and the decision-making process that have so far been neglected by this literature. More importantly, we point to the differential effects associated with different types of investor, focusing attention on differences between corporate and financial investors, and relate these effects to the different objectives (strategic vs. purely financial) that investors pursue. In so doing, we contribute to the growing stream interested in assessing the differential impact on portfolio companies of investments by corporations (see e.g. Park and Steensma, 2013; Bertoni et al., 2013; Chemmanur et al., 2014; Colombo and Murtinu, 2016). As far as we know, no previous study has examined the organizational impact of corporate investments.

This paper has some limitations that pave the way to further research. First, we took advantage of a peculiar sample. Our informants are highly educated entrepreneurs coming from the same technical university and most sample EVs are located in a highly developed geographic area (i.e. the North of Italy). We acknowledge that this choice may raise concerns about the generalizability of our results. We cannot take it for granted that our results are valid for EVs founded by less educated individuals or located in peripheral geographic areas, which for example may encounter greater difficulties in enlarging their
TMT. Moreover, the findings of our qualitative study relating to differences in key aspects of the organization between EVs backed by corporate and financial equity investors are to be considered as exploratory and wait for more corroboration from large scale quantitative studies. Second, in this study we paid limited attention to moderating factors that may influence the association between organizational design and outside equity investments. For instance, one may want to examine how individual characteristics of the members of the TMT alter the association between EVs’ organization and financing modes. Existing literature has shown that entrepreneurs who are self-reliant and extroverted, on average, are less prone to involve new individuals in the TMT (Lee and Tsang, 2001). Similarly, prior research has pointed out that entrepreneurs with low levels of optimism and resilience tend minimizing the interactions with external investors and often refuse their suggestions (Zou, Chen, Lam, and Liu, 2015). It might be that the effects of outside equity investors on EVs’ organization are attenuated or magnified depending on the personality traits of the members of the TMT. Similarly, we did not examine how outside equity investors’ characteristics different from their type (independent VC vs. corporate investors) affect their ability to influence the organization of the EVs in which they invest. For instance, scholars have shown that central, highly reputable VCs, have on average higher impact on the performance of the portfolio EVs (Nahata, 2008). The changes triggered by these investors on the focal EV’s organization may be an important mediating factor. Third, we examine here the dynamics and mechanisms underlying the association between EVs’ organization and the presence of outside investors in EVs’ equity capital. Conversely, we did overlook the effects of the different organizational changes triggered by different investors on the performance of both the EV and the investor. We therefore call for further studies that investigate these research questions.
These caveats withstanding, we are confident that our study has important implications for practitioners and policy-makers. We showed that involving an outside equity investor favors the professionalization of the EV’s organization. This is an important benefit for entrepreneurs. However, we have also highlighted that the organizational changes triggered by investors that have short-term financial objectives also serve the purpose of changing the locus of control, allowing investors to more easily oversight EVs’ operations and influence its decision-making process. Entrepreneurs should carefully consider these aspects when evaluating competing offers from different types of investor. Our findings about the organizational changes triggered by corporate investors are also important for policy-makers interested in designing effective scheme to support EVs. Our paper clearly documents that outside equity investors favor the professionalization of EVs’ organization and that these effects materialize also in the presence of a corporate investors. Hence, policies that stimulate investments in EVs by incumbent firms indirectly have the likely benefit of making EVs’ operations more effective.

Overall, we are confident that this study has laid the foundations to stimulate a theoretical and empirical research agenda in this crucial aspect at the intersection between organizational design and entrepreneurial finance.


Delmar, F., & Shane, S. (2004). Legitimating first: Organizing activities and the survival of


Policy, 32(9), 1555-1568.


Meijarard, J., Brand, M., & Mosselman, M. (2005). Organizational structure and


**TABLES**

**Table 1.** Descriptive statistics and correlations (p-values in parentheses)

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
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<tbody>
<tr>
<td>(1) TMT’s size</td>
<td>2.329</td>
<td>1.280</td>
<td>1.000</td>
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<td></td>
<td></td>
<td></td>
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<td>(2) TMT’s functional specialization</td>
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<td>2.222</td>
<td>0.706</td>
<td>1.000</td>
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<tr>
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<td>-0.318</td>
<td>-0.222</td>
<td>1.000</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td>(0.000)</td>
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<td></td>
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<tr>
<td>(4) Intra-TMT delegation</td>
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<td>0.466</td>
<td>0.410</td>
<td>0.601</td>
<td>-0.024</td>
<td>1.000</td>
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<td></td>
<td></td>
<td></td>
<td>(0.000)</td>
<td></td>
<td>(0.000)</td>
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<tr>
<td>(5) Extra-TMT delegation</td>
<td>1.130</td>
<td>0.266</td>
<td>-0.328</td>
<td>-0.344</td>
<td>0.286</td>
<td>-0.228</td>
<td>1.000</td>
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<td></td>
<td></td>
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<td>(0.000)</td>
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<td>(0.000)</td>
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<td>(6) Outside equity</td>
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<td>(0.841)</td>
<td>(0.056)</td>
<td>(0.417)</td>
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For correlations between dummy variables we used tetrachoric correlation, while between dummy and continuous variables we used point biserial correlation.

**Table 2.** Comparison of EVs’ organizational design with respect to the presence of outside equity

<table>
<thead>
<tr>
<th></th>
<th>Overall</th>
<th>Without outside equity</th>
<th>With outside equity</th>
<th>test</th>
<th>p-value</th>
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<tr>
<td>n = 255</td>
<td>n = 228</td>
<td>n = 27</td>
<td></td>
<td></td>
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<tr>
<td>TMT’s size</td>
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<td>3.296</td>
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<td>TMT’s functional specialization</td>
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<td>3.363</td>
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<td>1.598</td>
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<td>Extra-TMT delegation</td>
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<td>1.133</td>
<td>1.103</td>
<td></td>
<td>0.768</td>
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**Table 3.** Comparison of EVs’ organizational design with respect to the means of financing

<table>
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<tr>
<th></th>
<th>Overall</th>
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<th>Financial debt (no outside equity)</th>
<th>Bootstrapping</th>
<th>ANOVA</th>
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<td>n = 255</td>
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<td>n = 156</td>
<td>n = 72</td>
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<td>3.296\textsuperscript{a}</td>
<td>2.321\textsuperscript{b}</td>
<td>1.986\textsuperscript{b}</td>
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<tr>
<td>TMT’s functional specialization</td>
<td>3.503</td>
<td>4.688\textsuperscript{b}</td>
<td>3.511\textsuperscript{b}</td>
<td>3.041\textsuperscript{b}</td>
<td>0.004</td>
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<tr>
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<td>0.630\textsuperscript{a}</td>
<td>0.609\textsuperscript{a}</td>
<td>0.681\textsuperscript{a}</td>
<td>0.584</td>
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<tr>
<td>Intra-TMT delegation</td>
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<td>1.598\textsuperscript{a}</td>
<td>1.429\textsuperscript{a, b}</td>
<td>1.331\textsuperscript{b}</td>
<td>0.036</td>
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<td>Extra-TMT delegation</td>
<td>1.130</td>
<td>1.103\textsuperscript{a}</td>
<td>1.112\textsuperscript{a}</td>
<td>1.179\textsuperscript{a}</td>
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</tbody>
</table>

In the table, group means are reported. In each row, if group means have the same superscript label then there are not statistical differences among them basing on the Sheffe post-hoc test. The superscript ‘a’ represents the highest value, ‘b’ the next highest value, and ‘c’ the lowest value.
Table 4. Key informants’ description

<table>
<thead>
<tr>
<th>ID</th>
<th>EV’s name</th>
<th>Description</th>
<th>Industry</th>
<th>Employees</th>
<th>Outside equity</th>
<th>Investor’s type</th>
<th>TMT’s size</th>
<th>TMT’s functional specialization</th>
<th>Hierarchical TMT</th>
<th>Intra-TMT delegation</th>
<th>Extra-TMT delegation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Alfa</td>
<td>Development of advanced information computer technologies and solutions with a particular focus on HealthCare, Telemedicine, sport and fitness</td>
<td>Manufacturing</td>
<td>4</td>
<td>Yes</td>
<td>Corporate</td>
<td>4</td>
<td>6.250</td>
<td>No</td>
<td>1.526</td>
<td>1.000</td>
</tr>
<tr>
<td>2</td>
<td>Beta</td>
<td>Development of software to handle HealthCare services</td>
<td>Services</td>
<td>4</td>
<td>Yes</td>
<td>Corporate</td>
<td>2</td>
<td>5.000</td>
<td>No</td>
<td>1.789</td>
<td>1.000</td>
</tr>
<tr>
<td>3</td>
<td>Gamma</td>
<td>Production of plastic injected coffee capsule</td>
<td>Manufacturing</td>
<td>12</td>
<td>Yes</td>
<td>Corporate</td>
<td>3</td>
<td>6.670</td>
<td>Yes</td>
<td>1.474</td>
<td>1.000</td>
</tr>
<tr>
<td>4</td>
<td>Delta</td>
<td>Consultancy company specialized in optimization of production portfolios and / or energy supply</td>
<td>Services</td>
<td>8</td>
<td>Yes</td>
<td>Corporate</td>
<td>2</td>
<td>4.500</td>
<td>No</td>
<td>1.368</td>
<td>1.000</td>
</tr>
<tr>
<td>5</td>
<td>Epsilon</td>
<td>Digital platform to organize shared sailing boat holidays</td>
<td>Services</td>
<td>7.5</td>
<td>Yes</td>
<td>Financial</td>
<td>2</td>
<td>4.000</td>
<td>No</td>
<td>1.579</td>
<td>1.000</td>
</tr>
<tr>
<td>6</td>
<td>Zeta</td>
<td>Software development and consulting company focused on systems with high technological content</td>
<td>Services</td>
<td>10</td>
<td>Yes</td>
<td>Financial</td>
<td>3</td>
<td>2.000</td>
<td>No</td>
<td>1.632</td>
<td>1.000</td>
</tr>
<tr>
<td>7</td>
<td>Eta</td>
<td>Development of Project Portfolio Management and Custom Relation Management software</td>
<td>Services</td>
<td>5</td>
<td>Yes</td>
<td>Financial</td>
<td>2</td>
<td>5.000</td>
<td>No</td>
<td>1.176</td>
<td>1.105</td>
</tr>
<tr>
<td>8</td>
<td>Theta</td>
<td>Production of self-recharging wheels for electric bikes</td>
<td>Manufacturing</td>
<td>14</td>
<td>Yes</td>
<td>Financial</td>
<td>8</td>
<td>7.880</td>
<td>Yes</td>
<td>1.526</td>
<td>1.000</td>
</tr>
<tr>
<td>9</td>
<td>Iota</td>
<td>Consultancy company specialized in Built Environment Engineering</td>
<td>Services</td>
<td>9</td>
<td>No</td>
<td>-</td>
<td>3</td>
<td>5.330</td>
<td>Yes</td>
<td>2.263</td>
<td>1.000</td>
</tr>
<tr>
<td>10</td>
<td>Cappa</td>
<td>Development of software for social media marketing</td>
<td>Services</td>
<td>5</td>
<td>No</td>
<td>-</td>
<td>1</td>
<td>1.000</td>
<td>Yes</td>
<td>1.000</td>
<td>1.000</td>
</tr>
<tr>
<td>11</td>
<td>Lambda</td>
<td>Development of software for workout management, sport and fitness</td>
<td>Services</td>
<td>3</td>
<td>No</td>
<td>-</td>
<td>2</td>
<td>4.500</td>
<td>Yes</td>
<td>1.222</td>
<td>1.000</td>
</tr>
<tr>
<td>12</td>
<td>Mi</td>
<td>Consultancy company specialized in qualification and validation of chemical, pharmaceutical, equipment and systems</td>
<td>Services</td>
<td>8</td>
<td>No</td>
<td>-</td>
<td>3</td>
<td>5.670</td>
<td>Yes</td>
<td>1.789</td>
<td>1.000</td>
</tr>
</tbody>
</table>

a: EVs have been changed to ensure anonymity  
b: part-time employees count 0.5
Table 5. Synthesis of the relation between EVs' organizational design and their means of financing

<table>
<thead>
<tr>
<th></th>
<th>Strategic outside equity investor</th>
<th>Financial outside equity investor</th>
</tr>
</thead>
<tbody>
<tr>
<td>TMT's size</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Main motivation</td>
<td>Efficacy</td>
<td>Efficacy and Monitoring</td>
</tr>
<tr>
<td>TMT's functional specialization</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Main motivation</td>
<td>Efficacy</td>
<td>Efficacy and Monitoring</td>
</tr>
<tr>
<td>Intra-TMT delegation</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Main motivation</td>
<td>Efficacy</td>
<td>Monitoring</td>
</tr>
</tbody>
</table>
APPENDIX A

List of strategic decisions proposed in the questionnaire:

1. Developing innovative products and services
2. Introducing significant changes in products and/or services
3. Introducing major changes in marketing activities
4. Entry or exit decisions from markets
5. Opening of new product lines
6. Major price decisions
7. Radical changes in organizational processes and procedures
8. Significant changes in the organizational structure
9. Strategic alliances/partnership with other firms or organizations (acquisitions and joint venture are not included)
10. Major business investments (e.g., acquisitions, joint ventures, creation of new firms, opening new plants, creation of new infrastructures)
11. Hiring and firing
12. Promotions, salaries and incentives for the employees
13. Design of management control systems (e.g., planning, budgeting, controlling)
14. Relations with outside equity investors (e.g., Business Angels, Venture Capitalists)
15. Opening/closing of relations with financial institutions
16. Strategic decisions about purchases (e.g., major supplier selection)
17. Strategic decisions about production insourcing/outsourcing
18. Expansion of production capability, expansion and modernization of production equipment and plants
19. Significant investments in information and communication systems