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Entrepreneurial competences, liability of newness and infant survival: Evidence from the service industry

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## Evidence from the service industry

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### Abstract

**Purpose** – What entrepreneurial competences can increase the start-ups' infant survival chances? How can the liability of newness be successfully handled? Positioned in this research stream, which, especially over recent years, has been particularly lively also in the *Journal of Management Development*, the purpose of this paper is to meet not only the research, but also the education and practice-oriented purposes of the journal.
**Design/methodology/approach** – How can routines' exploitation counteract the liability of newness? How can entrepreneurial orientation oppose it? Why is the liability of adolescence important when discussing the performance of start-ups? To address these questions, taken separately into account, the paper presents a set of three case studies from the service industry, each of which is based on a specific research design.
**Findings** – The authors found that the routines' exploitation mechanisms, the degree of entrepreneurial orientation of the founding team, and the stock of the initial assets, could be all considered consistent predictors of new ventures' infant survival. The authors thus believe that the findings may offer a useful contribution both to current and prospective managers and entrepreneurs.
**Originality/value** – Stinchcombe's assumption about the tremendous failure rate associated with the earliest stage of start-ups' life cycle has been proved to be valid at least in the most recent evidence from both Europe and the USA. At the same time, formalizing a checklist of competences appropriate to increase the possibilities of organizational infant survival appears as a priority not yet accomplished. Thus, the study is aimed at providing some useful food for thought on this issue.

**Keywords** Competences, Entrepreneurship, Management, Service industries, Case studies, Adaptation, Survival, Newness, Stinchcombe
**Paper type** Case study

### 1. Introduction

Having received constant consideration by the management community, addressing what competences drive organizational performance has also constituted one of the research streams mostly frequented by the *Journal of Management Development* over time (Boyatzis, 2008; Sheard and Kakabadse, 2004).

To date, the journal's ongoing dialogue about the competences/performance relationship is increasingly committed to devoting particular importance to the entrepreneurial context. In fact, studies in the journal have also recently ranged from entrepreneurship education (Baden and Parkes, 2013) and personal characteristics of entrepreneurs (Daly and Davy, 2016; Lee-Ross, 2015), to factors influencing or limiting entrepreneurship worldwide (Omri *et al.*, 2015). Our paper is thus positioned in this last avenue, because we aim to address the question of what entrepreneurial

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competences can increase start-ups' infant survival chances. Through our effort, we intend to meet not only the research, but also the education and practice-oriented purposes of the journal.

The attention to entrepreneurial infant survival (or failure) owes its birth and tremendous development mostly to the liability of newness construct, introduced by Arthur Stinchcombe in 1965. The core assumption of this construct is associated with the failure rate of start-ups, which Stinchcombe hypothesizes to be enormous in the earliest stage of their existence and then monotonically decreases.

Since the 1970s, the liability of newness has been inspiring studies into the antecedents of start-ups' early survival or death processes (Aldrich, 2011; Bruton *et al.*, 2010; Santos and Eisenhardt, 2009). Many scholars currently continue to provide the research community with scientific support about the robustness and consistency of the newness construct, from both a conceptual (Yamada, 2004) and analytic (Cheng and Low, 2006; Farid, 2007; Poon *et al.*, 2009) perspective.

In substance, Stinchcombe's assumption about the tremendous failure rate associated with the earliest stage of start-ups' life cycle has been proved to be valid at least in Europe and the USA. As we will expound in our theoretical framework, we can also argue that, especially since the end of the twentieth century, both scholars and practitioners have been gradually, but constantly, increasing their efforts towards the research of what entrepreneurial competences can successfully cope with the liability of newness, thus enhancing the survival chances of start-ups.

The latest research stream is particularly lively to date, as conclusive evidence is substantially missing. Thus, our case study analysis about three start-ups' survival challenges in the service industry is aimed at providing some useful food for thought on this issue. The paper is composed of four sections: the Section 2 includes the theoretical framework; the Section 3 evidences the methodology used, with a specific focus on selection criteria, research design and data collection; the Section 4 presents the results from the case narratives; finally the Section 5 evidences the managerial implications which constitute the core of our concluding discussion.

## 2. Theoretical framework

The liability of newness predicts that, although monotonically declining with age, failure rates are high in the first years of organizations' life cycle. Stinchcombe maintains that this is substantially because of the initial absence of two entrepreneurial competences inside start-ups, in particular if compared to their mature counterparts. The former competence is experience, which is naturally scarce in most start-ups:

> New organizations, especially new types of organizations generally involve new roles, which have to be learned; […] The process of inventing new roles, the determination of their mutual relations and of structuring the field of rewards and sanctions so as to get the maximum performance, have high costs in time, worry, conflict, and temporary inefficiency (Stinchcombe, 1965, p. 148).

Physiologically growing with time in the surviving start-ups, experience often fosters the exploration and exploitation of routines appropriate for organizational adaptation.

The latter competence is trust, internally associated with the initial instability of the personal relationships among the start-ups' participants; this instability negatively affects the start-ups' internal systemness as a key condition for infant selecting in processes (Cafferata, 2016). Similarly, precarious trust is also regarding the relationship between start-ups and their external environment, especially their unstable connections with stakeholders, i.e. customers, suppliers, financial institutions and governmental bodies (De Vaughn and Leary, 2010; Strotmann, 2007):

> New organizations must rely heavily on social relations among strangers. This means that relations of trust are much more precarious in new than old organizations; […] one of the main resources of old organizations is a set of stable ties to those who use organizational services. Old customers know how to use the services of the organization, have built their own social systems to use the old products or to influence the old type of government, are familiar with the channels of ordering, with performance qualities of the product, with how the price compares, and know the people they have to deal with – whom to call up to get action, for instance (Stinchcombe, 1965, p. 150).



With regard to what explained above, entrepreneurial competences have been recently defined as a "specific group of competences relevant to the exercise of successful entrepreneurship" (Mitchelmore and Rowley, 2010, p. 93), which can be associated either with the growth of new or small businesses (e.g. Colombo and Grilli, 2005) or with the concept of corporate entrepreneurship. The hypothesis is that there is a link between competences and firms' life cycle; in particular, the changing role of the entrepreneur through the birth, survival and growth phases, impacts first on competences and, consecutively, on the success of the firm in each stage (e.g. Churchill and Lewis, 1983).

On this basis, in our introduction we have premised that the liability of newness continues to find substantive support at both a conceptual (Abatecola *et al.*, 2012; Breslin, 2008; Cafferata *et al.*, 2009) and empirical (Abatecola, 2013; Dobson *et al.*, 2013; Uli, 2012) level. For the specific purposes of this paper, we have also asserted that, especially since the end of the twentieth century, both scholars and practitioners have been gradually, but constantly, increasing their efforts towards the research of what entrepreneurial competences can successfully cope with the liability of newness, thus enhancing the survival chances of start-ups – in this regard, an important issue regarding the relationship between entrepreneurial orientation and infant survival; in fact, many studies have recently demonstrated a positive correlation between them (Cao *et al.*, 2015; De Vita *et al.*, 2014; Engelen *et al.*, 2015; Rosenbusch *et al.*, 2013).

Entrepreneurial orientation can be associated with different facets, e.g. an important contribution regarding the impact of business planning on the start-ups' success and survival. Some scholars believe that written business plans are a mere formality for new ventures (Honig and Samuelsson, 2012). Conversely, other studies (Burke *et al.*, 2010) show that there can be a positive relationship between formal planning and start-ups' survival chances, but this depends on the venture's profile and business context.

The market and opportunity issue is also pivotal for entrepreneurial orientation, with product innovation (and its successful commercialization) appearing as the single most important survival factor. For example, through analysing a sample of infant firms that develop physically assembled products, Marion and Meyer (2011) demonstrate that, when implemented together, industrial design and cost engineering enhance both the effectiveness and efficiency of new product development in early-stage firms, thus reducing their risk of being selected out by the environment.

Together with the aspects mentioned above, a more general study of which entrepreneurial competences can constitute strategic assets for infant survival purposes presently dominates scholars' research agenda. One recent experiment has tried to establish a relationship between the distribution channel choices of new entrepreneurial ventures (NEVs) and their performance (Brettel *et al.*, 2011). Data collected from 330 random NEVs show that the identified antecedents explain a large part of the variance in NEVs' channel choice; in addition, NEVs that accomplish a fit between their distribution channel system and competition-related variables tend to perform better. Similarly, Hormiga *et al.* (2011) highlight the key role played by start-ups' relational capital. With a strict focus on family business, Schjoedt *et al.* (2013) obtain converging evidence.

For the specific goals of our research we need to provide evidence that, over time, the liability of newness has also been integrated by some subsequent theoretical developments, with the liability of adolescence construct (Fichman and Levinthal, 1991) meriting particular attention in our study. In fact, adolescence is, currently, considered as somehow complementary to newness. In particular, while Stinchcombe forecasts a monotonic decrease of the start-ups' failure rate, the liability of adolescence forecasts a non-monotonic inverted U-shaped path. This means that, in the latter construct, the failure rate is low at the very beginning, then increases for a certain amount of time (i.e. adolescence), reaches a peak and finally starts to diminish again.

In other words, the liability of adolescence mostly differs from the liability of newness for a hypothesized honeymoon, considered as an initial buffer of time in which start-ups appear to be unaffected by the selecting out processes alternatively deriving from the existing competition. The honeymoon duration is not constant – it can vary from months to years. In particular, this duration is proportional to the start-ups' initial amount of entrepreneurial competences.

## 3. Methods

From our theoretical framework, three building blocks emerge as specific lines of inquiry: How can routines' exploitation counteract the liability of newness? How can entrepreneurial orientation countervail it? Why is the liability of adolescence important when discussing the performance of start-ups? To address these questions, taken separately into account, we adopted the most recent techniques associated with qualitative research (Lee and Cassell, 2013; Symon and Cassell, 2012) and case study methodology (Lee, 2012; Yin, 2013). Below we explain our selection criteria, research design and data collection procedures.

### *3.1 Selection criteria*

The three selected cases present two main similarities: they are all in the service industry and are all start-ups at the time of our data collection and investigation. Each was specifically selected because of particularly fitting the single line of inquiry associated with it. In fact, for the relationship between newness and routines, we chose Case 1, which is an Italian start-up operating in well-being. For the relationship between newness and entrepreneurial orientation, we chose Case 2, also an Italian start-up active in facility management. For the relationship between newness and adolescence, we chose Case 3, which is an American start-up active in social gaming.

What also appears as interesting from our selection is that while Cases 1 and 2 serve as successful examples of entrepreneurial competences and associated infant survival, Case 3 represents an instructive example of declining performance after the earliest years of positive existence. This factual/counterfactual selection of cases reflects our desire to underline differences in the start-ups' adaptation mechanisms to environmental stimuli.

*3.2 Research design*

Adopting an appropriate research design requires coherency among three relevant parameters: type of research question, extent of control over behavioural events, and degree of focus on contemporary or historical events (Yin, 2013).

On this premise, Case 1 follows a quasi-experimental case design (e.g. Cook *et al.*, 1979). At the very beginning, the start-up's employees were unable to exploit their individual market expertise and, as a consequence, the productivity indicators were well below the industry averages. Thus, a new branch manager was appointed with the aim of driving the change inside the firm through enacting innovative behaviours, both at the individual and group level. In particular, a new rewarding mechanism needed to give greater importance to the employees' results, rather than to the strict observance of rules. To this end, together with the new branch manager, we launched a two-week experiment aimed at changing the firm from a structure oriented to a customer-oriented start-up.

Instead, we applied a pure case design (e.g. Eisenhardt, 1989) to Case 2, as we had no control over behavioural events and our focus was on contemporary events. Founded in 2010 by a young Italian entrepreneur, the firm was initially a spinoff of a photovoltaic business for the residential market, which had grown thanks to the European incentives for the use of renewable solar sources. In 2012, after only two years of existence, the Case 2 start-up topped sales of €1 million, with an annually compounded growth rate of about 30 per cent. In particular, we derived the Case 2 design from Covin and Slevin (1989), who introduced the concept of entrepreneurial orientation when discussing the performance of 161 newborn small firms.

Finally, we adopted a quasi-historical case design (e.g. Harrison, 2002) in Case 3, founded in the second half of the decade and considered, at least at the beginning, as one of the most profitable players in social gaming worldwide. Pure history "is the preferred method when there is virtually no such control or access" (Yin, 2013, p. 12). Case studies and histories share the same basic techniques, but the former may also rely on two additional sources of evidence: direct observations and interviews. As shown in the next pages, when history describes contemporary events, the history's methodology begins to overlap with the case study approach.

*3.3 Data collection*

As explained here, we used multiple sources to write the cases. In Case 1, the documents gathered and analysed for the experiment regarding the performance appraisal process, were: memos, produced by the branch manager and/or her affiliates after each appraisal session, mystery shop visit or shadowing of employees (at least one memo per day for each employee); e-mails, regarding the information exchange inside the branch (their number varied during the period analysed, but information exchanges happened at an estimated average rate of five per day); minutes of meetings, originated during the follow-up meetings between the branch manager (and/or her affiliates) and the employees after each assessment (normally lasting 30 minutes per session); reports, prepared by the branch manager and addressed to the headquarters' human resource department (one report per employee per month); individual turnover figures, in order to track, quantitatively, the evolution of the practice as a combination of the individual-level variations.

Other important sources of evidence were: open-ended unstructured interviews, led by the branch manager, in order to gain employees' feedback about the experiment; observations, in the form of shadowing of employees during working hours for, at least, 30 minutes/employee per each day of the two-week experiment.

In Case 2, during a two-month gathering process, we collected the following documents: one questionnaire submitted to the founder using the nine-item semantic scale developed by Miller (1983) for estimating the degree of entrepreneurial orientation. The questionnaire is divided into three sections (i.e. innovativeness, proactivity and risk taking), each containing three questions graded on a scale from 1 to 7; annual reports, related to the first two years of activity; detailed revenues figures about any transaction that occurred during the first two years of activity, in order to track the profitability of the different business initiatives undertaken by the founder.

Other important sources of evidence were open-ended structured interviews, aimed at integrating Miller's estimation questionnaire with two other important dimensions of entrepreneurial orientation: autonomy and competitive aggressiveness (Covin and Slevin, 1989).

Finally, in Case 3 we also used multiple sources, with most of the data collected from public domains. In particular, we analysed many documents related to the financial/operational performance of the start-up: financial reports, produced by the company to fulfil the SEC requirements (data analysed on a quarterly, semi-annually and yearly basis); analysts' coverage, i.e. reports prepared by investment banks for their investors and containing estimates, revenues' projections and experts' views on market trends; stock prices, in order to track the evolution of the firm during the historical case study analysis.

Other important sources of evidence were: publicly released interviews, collected mainly from online sources; observation of physical artefacts, consisting of screening the evolution of the software periodically, in order to clarify the strategic direction of the company in terms of product/service offered.

## 4. Results

Below we present the main results from the three case narratives investigated; these include anecdotal evidence from the case interviews.

### *4.1 Case 1*

The first week of experimentation addressed changing the individual-level cognitive approach towards routines' ambidexterity potential (the employees would pursue both exploration and exploitation of routines):

> Almost all our employees already knew how to increase sales because of their previous work experience in related economic fields; however, when I entered the company, the group's organizational structure, the performance appraisal system, the feedback mechanism and the rewarding scheme all worked against the firm performance! A good employee was considered as the one who followed the headquarters' rules as strictly as possible; the actual company's performance was not even part of the equation (Branch manager, first interview).

The areas of variation were, therefore, the most important parameters for the experiment's setting. In particular, we rationalized the areas of variation allowed through the following steps:

(1) synthesizing the products/services offered in homogeneous and clearly distinguishable categories, i.e. "rationalizing the firm's offering, because relevant information was available but it was completely unstructured" (branch manager, initial experiment design meeting);

(2) identifying sub-categories within the same categories (this helped find similar evolutionary paths among the individual/group behaviours); and

(3) assessing potential extensions that every employee could have added to the service, e.g. "if the client enters the shop to receive a pedicure treatment, the employee can extract additional value through offering the feet scrub service as an addition" (branch manager's quote, initial experiment design meeting).

The experiment's first week results can be synthesized in the following innovations:

- *Démarchages ("Catch their attention!").* We found that some of the firm's products were more effective in advertising the company than any commercial dialogue. This innovation dramatically increased the total number of customers and supported both the service and product sales:

  Providing the passenger in transit with a demonstration of the shoulder massager outside the shop, I was able to catch customer' attention more effectively than through fliers, manifests or other commercial material (Employee X).

- *Product/service integration.* The employees learned how to integrate any service with its natural product combination:

  When a client enters the shop for a chair massage, now I also offered a trial demonstration of a related product, such as the shoulder massage (Employee Y).

- *Teaching experience.* When performing the service, employees taught clients how a particular treatment had to be executed to maximize the experience and how to replicate those benefits when performing similar treatments at home. This practice became part of the firm's established routine and created impressive results in terms of turnover, thanks to the increased amount of products sold.

In the second week, the possibility of individual variations in corporate routines was paired with the creation of collective routines (i.e. at group level). In particular, the purpose of this second week experiment was that of fostering a mechanism of participative routines' creation, and the associated workforce's continuous learning as well. For this reason, the management introduced internal meetings labelled *ateliers* to foster the retention process of the valuable variations which eventually occurred through imitative replication. Through these weekly meetings, the firm encouraged open discussions about its overall targets and refocused its employees around a common vision and culture.

The cumulative observations gathered in the second week of experimentation were, therefore, as follows:

- The performance realized by the evolutionary group (i.e. the sub-group of the staff with which we enacted the variations) was substantially higher than that of the check group (which instead continued to use corporate routines), either looking at the first week or the second week results:

  The revenues usually generated by the employees included in the *evolutionary group* prior to the experiment were, more or less, in line with the performance of the *check* group. I think that the jump in revenues came from the new approach (Branch manager, follow-up interviews).

- We might state that differences between the two approaches above are even more accentuated in difficult environmental conditions.
- The best performer in relative terms was the rule-deviant type of employee:

  She was so successful because she innovated the selling procedure of one of our worst selling products! (Branch manager, follow-up interviews).

- The rule-follower type of employee became the best performer, in absolute terms, after the two-week experimentation:

  Probably successful innovations are linked to personal characteristics, nevertheless they can be transferred to other employees who do not possess a creative attitude (Branch manager, follow-up interviews).

- Even during the second week, the staff's total turnover increased because of the effective group's transfer mechanism enacted, i.e. the *atelier*. Moreover, all the employees of the evolutionary group increased their personal results compared to the first week.

In conclusion, the innovations introduced, both at the individual and group level, increased the employees' individual turnover by 166 per cent and allowed the start-up to close the fiscal year of 2012 avoiding costly losses.

*4.2 Case 2*

The positive performance realized by this firm relates to the entrepreneurial orientation and proactivity of the firm's founder. During the start-up phase, the firm launched Energy Point, a shop aimed at promoting the firm's product/service packages and at signing new contracts:

> Since the beginning, my firm was very proactive in predicting clients' needs and offering a very complete service, including assistance and maintenance. It was also very proactive in reaching potential clients and being sure that they knew the existence of the company and its offering. This was the main reason behind the launch of the Energy Point (Founder, 2-month continuous interview process).

Service bundling was also an important component of the firm's success. In fact, since the beginning, the firm's business model was focused on offering the most complete service possible. This included not only the sales of photovoltaic systems, but also auxiliary services in each phase of the project, such as consultancy on contracting, financing and post-sales maintenance:

> My company started almost immediately to offer innovative product/service combinations – unusual for the market penetrated. We offer three basic pre-configured options, each including a particular product/service bundle, with clients able to decide on the degree of assistance and maintenance they wanted (Founder, 2-month continuous interview process).

Thus, the company did not enter the market with any disruptive innovation, because the photovoltaic business and related activities were already known. Instead, competitive aggressiveness and risk-taking features were very apparent. Indeed, people in the service division (i.e. the division responsible for installing the photovoltaic panels) used to learn how to perform the different tasks on the basis of a strong, daily, learning-on-the-job perspective.

The firm's financial performance was mainly driven by *Conto Energia*, with the governance able to introduce three complementary business units, i.e. solar thermal, hot water heating services and maintenance works, after just one year from the firm's founding. This introduction corroborates the idea of high levels of innovation aimed also at a risk differentiation strategy.

Despite being a small start-up, the firm invested in customer relationship management (CRM) to support its strong market-orientation. CRM was aimed at improving the knowledge transfer process among people interacting inside and with the company:

> We divide customers in three types, namely *lead* (i.e. people who ask for some information but nothing more), *opportunity* (i.e. people who ask for a budget) and *customer* (i.e. people who sign a contract) depending on their *contracting stage*, with their individual status being checked in real time. Our success rate from *lead* to *customer* is close to 50% (Founder, 2-month continuous interview process).

The start-up also developed a partnership with a major company operating in the renewable energy sector on a worldwide scale:

> It was more an affiliation than a partnership because of the very high entry and success fees. The total price of the relationship was unsustainable in the long run, but the link with an energy giant was very precious in terms of commercial knowledge about the market and for the training courses offered (Founder, 2-month continuous interview process).

The firm's top management team also showed proactivity through introducing new products, techniques or operating technologies, and maintaining, simultaneously, a very competitive approach towards its competitors. In fact, the company very quickly launched a new photovoltaic system, based on battery accumulation and aimed at counterbalancing the negative effects of the financial crisis and the potential threats coming from the firm's task environment:

> Given the lack of legislation and the clients' reluctance around the battery-accumulated photovoltaic system concept, my firm began to sell it as a leasing contract, thus renting the battery system to clients and providing them with maintenance and disposal services as an integrated package (Founder, 2-month continuous interview process).

In contrast to the proactive entrepreneurial attitude, the firm did not maintain a very risky posture:

> My team is very good at doing its job, but we are not interested in experimental projects! Because of the nature of the products themselves, we cannot change them, we can just invent new installation processes (Founder, 2-month continuous interview process].

Instead, the firm preferred to deal with lower-risk projects with a predictable rate of return. The company also reduced its operating risk through maintaining a lean inventory structure; rather than buying solar panels and incurring potential insolvency problems, it waited for clients' down payment before actually placing orders for panels.

Finally, the business relationships between the firm and its parent company also appear worthy of mention. In fact, while the latter may have somehow hindered the strategic autonomy of the former, these relationships have surely been a valuable asset during the former's infancy, in that they have provided the nascent company with a good initial stock of assets needed to overcome failure.

*4.3 Case 3*

At the very beginning, the Case 3 start-up registered a tremendous market impact mainly because of its partnership with a huge social media partner. In particular, the start-up introduced the innovative concept of in-game currency, according to which a game is offered free of charge, but users can enable additional contents by paying with an internal virtual currency previously bought with real money. In this regard, the firm's apparently winning intuition was that of introducing a social dimension into gaming through taking advantage of its social media partnership. In fact, the agreement implied that the start-up would give back a good percentage of its users' in-game spending turnover to the partner, while this would grant the start-up privileged advertisement campaigns for its social games.

Another important factor in understanding the start-up's performance is the corporate culture, focused on business results. To foster this attitude, several managers and directors specialized in knowledge management were hired. In sum, over the first years of existence, the combination of the above-mentioned drivers apparently provided the start-up with the appropriate competences necessary to survive in the rising social gaming market.

However, this start-up has faced numerous business issues to date. In particular, over the last year: daily active and monthly active users decreased by about 45 and 39 per cent, respectively; monthly unique users and monthly active players decreased by about 36 and 53 per cent, respectively. These indicators express a decrease, on average, of 40 per cent in the business activities as a whole and this brought the firm's governance to follow a severe cost reduction strategy by quickly making redundant 18 per cent of the entire workforce.

The start-up went public about three years ago and it was considered as one of the most promising initial public offerings (IPOs) of that time; but, after reaching its peak, the stock price soon collapsed by 60 per cent. The first driver responsible for the start-up's decline was the unsuccessful renewal of its games portfolio. Two of the most promising game launches in the year of the IPO struggled to stay in the ranking of the top 50 mobile games worldwide. At the same time, earlier successful games were rapidly losing their audience, as recognized in the firm's most recent annual reports.

Sales and marketing expenses, with advertising costs in particular, also played a crucial role in the decline. In fact, during the start-up phase, the Case 3 firm took advantage of its social media partner's favourable advertising conditions; but, as more advertisers followed, advertising prices increased dramatically. This is why the company recently began a massive cost cutting strategy of its marketing costs in order to recover operating profit margins.

Lastly, about 80 per cent of the start-up's revenues were very dependent on its social media partner's business model. This captive relationship was potentially harmful for the start-up's business, which was conscious of the different potential threats associated with its partner's possible strategic behaviour. In particular, the start-up knew that its revenues would suffer a substantial decrease if its partner decided to: terminate or somehow limit the access to its platform; modify the terms of service (e.g. fees charged); establish more favourable relationships with the start-up's competitors; develop its own competitive offerings. For example, about two years ago the start-up's daily active users peaked. At that time, its social media partner was working on changes in its algorithms and that was harmful to those responsible for the start-up's viral marketing.

In sum, especially after the listing of both companies, the co-relationship was no longer feasible. In fact, the start-up's own website was soon launched as a proprietary distribution platform and, in parallel, the previous agreement with its social media partner ended.

## 5. Discussion and managerial implications

In this section we first discuss the main managerial implications emerging from our study. We then conclude by presenting some limitations to our analysis and suggesting some avenues for future research.

*5.1 Routines' exploitation*

As explained, Case 1 is mostly dedicated to explaining the potential benefits on start-ups' performance deriving from the exploitation of organizational routines. In this start-up, the most significant difficulty consisted of the severe headquarters' rules, which were inappropriate to its rapidly changing environment. Thus, as explained, the newly hired management, in collaboration with us, launched a two-week experiment aimed at radically reshaping the performance appraisal system and, as a consequence, the mechanisms of feedback and their associated processes of rewarding or sanctions. In particular, this new system had the goal of exploiting the hidden potential of the start-up's employees. In fact, based more on bureaucratic compliance than on organizational intrapreneurship, the old appraisal system had formerly minimized this potential.

In the first week, the employees' individual level constituted the specific unit of analysis, with the experiment aimed at fostering variations in their habits. As highlighted in the case, the most significant results achieved in this week were a higher appeal towards customers (thanks to what we have labelled *démarchages*), a more appropriate integration between products and services (thanks to an implemented product/service matrix which rationalized the start-up's offering portfolio), and a more specifically customer-oriented approach (i.e. the embedding of teaching services during the products' selling).

In order to increase the interactions at group level, the second week of the experiment was then focused on the implementation of an appropriate feedback matrix. It had its core in the design of a specific network of feedbacks between the employees' branch and the training manager's branch. Building group routines within a team implies negotiation among the group members. Thus, the second week was aimed at enhancing a process of collective routines' creation and, as its implicit consequence, employees' continuous learning. For this reason, the experiment's team used the organizational innovation which we labelled *atelier*. In sum, in terms of managerial implications, the organizational routines, exploited first for individuals, and second for groups, provided great support to the start-up's infant survival.

We can now more generally understand that the survival of a start-up mostly depends on its ability to establish efficient and effective routine learning processes among its participants, and an appropriate common knowledge base as well (Baden and Parkes, 2013; Pentland *et al.*, 2012). In this regard, it also appears worthy of mention here that, to date, there is a current debate on what conceptual approach to routines, entity or practice based, should be considered as the more appropriate (Breslin, 2016). The former substantially considers routines as automatic and standardized responses to environmental pressures, whose evolution, over time, depends mostly on the selection mechanisms activated by the forces external to organizations; the latter, instead, leaves more space for the free-will and intentionality of organizational top decision makers.

*5.2 Entrepreneurial orientation*

As explained, Case 2 is mostly dedicated to highlighting the potential benefits, in terms of organizational infant survival, deriving from appropriate entrepreneurial orientation. We have shown that, from the beginning, this start-up's business vision was aimed at reaching the first-mover competitive advantage through avoiding experimental projects. Its entrepreneurial intensity also served as a key element for infant survival. In fact, in almost 24 months, the start-up increased its initial four business units with an additional three, demonstrating a very high degree of entrepreneurial orientation.

Moreover, in Case 2, the firm's introduction of the new photovoltaic system based on battery-accumulation could have, at first, wrongly appeared to be a strategy induced by excessive optimism; but, as we have highlighted, this introduction was aimed at countervailing the downward implications of the macro-economic recession and the increasing low-end competition. Furthermore, the founding team's experience strongly favoured the acknowledgement of unrevealed opportune market niches and this served as a catalyst for having the start-up gain benefit from its first-mover advantage. In terms of managerial implications, the start-up's performance was also positively influenced by the founding team's technological and industrial know how, which fostered the initial support of different financial investors.

It also appears worthy of clarification here that entrepreneurial orientation should not be confused with excessive optimism, which has sometimes been found as a significant antecedent of start-ups' infant dismissal. In particular, some extant research results support the idea that high degrees of optimism can be detrimental to rational judgement and decision making (Åstebro *et al.*, 2007), thus serving as a catalyst for the early failure of new ventures. This considered, it also appears worthy of note that the social cognitive perspective (Baron, 2008; Hmieleski and Baron, 2009) has probably provided both scholars and practitioners with a more exhaustive picture about optimism. In particular, this perspective has found a positive relationship between the start-ups' profitability and single variables associated with the entrepreneurs as human individuals. Among their different features, for example, this is the case for their know how, motivations, expertise, attitudes and personality.

Furthermore, we have to stress that, together with the research specifically regarding entrepreneurial orientation, investigating the most vivid characteristics of any founding team has also been increasingly given tremendous relevance (Zhao *et al.*, 2013). For example, there are growing analyses coping with the importance of the founding team's marketing and industry expertise on its infant organization's probabilities of survival (Delmar and Shane, 2006). Some of these analyses, moreover, mainly revolve around the relevance of this team's human capital. In this regard, results generally find proof of a positive relationship between human capital-based characteristics and a start-up's survival chances (Mosey and Wright, 2007).

### *5.3 Liability of adolescence*

We have shown that our Case 3 can, conversely, shed some light on the liability of adolescence. In particular, the amount of initial assets strongly supported our Case 3 firm in its starting three-year honeymoon. More specifically, as we have detailed in the case, at the very beginning the formal cooperation with its social media partner, its cultural approach to business and the acquired knowledge transfer system, all provided the firm with key entrepreneurial competences for serving as a leader in social gaming.

At the same time, we have also theoretically unravelled that, after the honeymoon, a newborn's failure rate starts to grow. Thus, in Case 3, we have prospected several antecedents of the start-up's evolving profitability decline; e.g. these antecedents have consisted of inappropriate innovation within its product portfolio, increasing costs of promotion and, probably most of all, the status of being primarily an object of its social media partnership.

As for the last antecedent and, again, especially in terms of managerial implications, we might conclude that, in substance, one of the key entrepreneurial competences during the firm's start-up has then become the weakest immediately after its three-year honeymoon. This also seems chiefly why, as we have illustrated, this start-up is currently repositioning its environmental adaptation, mainly through an independent channel for product distribution.

Studying the specific relationship between newness and adolescence also opens the door to methodological challenges for further analyses. For example, Aldrich and Yang (2012) have recently called for more appropriate research designs and statistical techniques aimed at effectively testing the liability of newness. In particular, they maintain that scholars have largely concentrated their attention on registered start-ups rather than on purely nascent and emerging ones (i.e. Stinchcombe's most vivid focus). Relatedly, what about the so-called assets of newness (Choi and Shepherd, 2005), potentially deriving, for start-ups, from high-strategic flexibility and appealing to early customers of their goods or services, especially in turbulent environments?

### *5.4 Limitations and conclusions*

We have intended this paper for all those readers interested in enhancing their comprehension of what key entrepreneurial competences can improve the survival chances of start-ups. We have largely explained that, to date, this understanding is particularly lively in both research and practice about management development. Thus, through our case studies, we have specifically devoted attention to the issues of organizational routines, entrepreneurial orientation and liability of adolescence.

In conclusion, our analysis presents certain limitations, which can also constitute intriguing directions for future research. In particular, we selected the three cases from the service industry, mostly on the basis of their fitting with the specific research question that each of them was singularly intended to address (routines, orientation and adolescence, respectively). Although, given our specific goal in this paper, we consider this fitting criterion as enough to justify our choice, we are also conscious that differences exist in both the legislative framework and size of the selected cases. Thus, studying "if" and "how" our results could be affected by these aspects would represent an interesting avenue for further inquiry in this area. At the same time, comparing our results from this study with other cases from the service industry, or even from other industries, would appear as equally important for offering a useful contribution to both current and prospective managers and entrepreneurs. We also believe that, if properly handled, the findings reported in this paper can serve as a promising tool for this pivotal purpose.

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