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Entrepreneurial decisions: Insights into the use of support services for new business creation

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This research presents an integrative model about the use of those services that have been specifically designed to support entrepreneurial initiative. By contrast with conventional perspectives from the entrepreneurship field, mainly drawn from a resource-based view, we propose a two-fold approach to explain the utilization of services that are oriented to new business creation: by considering the role of resources within the start-up's reach (internal and external); by incorporating a behavioral and decision-making approach. On the basis of the suggested decision-making framework, a multi-stage decision model is developed and tested by means of a representative sample of entrepreneurs linked to a local development agency. The results show that the adoption and use of support services for new business creation is a complex and reflexive process, triggered by the entrepreneur's internal forces. The entrepreneur searches for information throughout the process and, with assistance from internal teams and external networks, evaluates the choices of business-support services. Our findings offer relevant implications and recommendations for business incubators and institutions.

Introduction

Business creation is a critical activity for innovation. Its impact is crucially reflected in economic growth and competitiveness. In fact, the formation of new firms is a very relevant source of an increase in job promotion and companies' productivity; this ultimately contributes to economic and social progress. But emerging businesses face situations that, when not adequately resolved, may affect their development. These situations often require advanced knowledge and capabilities, which might over-stretch a start-up's internal tangible and intangible resources (Gooderham, Tobiassen, Døving & Nordhaug, 2004; Dyer & Ross, 2008). To address these shortcomings (Van den Ven, Hudson & Schroeder, 1984; Peña, 2002; Chrisman & McMullan, 2000, 2004), many start-ups turn to external Business Support Services (BSS).

BSS are usually offered by business incubators and institutions (e.g. Business Link in the UK, the Kauffman Foundation in the US, the Small Enterprise Development Agency in South Africa, the Technologie Zentrum in Germany, Barcelona Activa in Spain) who, in their attempt to facilitate innovation, competitiveness and economic development (Mole & Bramley 2006), promote and deliver help to emerging businesses. Ranging from space incubation to networking opportunities and counseling services, BSS offer various knowledge and expertise resources (Chrisman & McMullan, 2000; Mole & Keogh, 2009) that start-ups might need. As a matter of fact, BSS programs often configure true collective learning environments, where entrepreneurs can acquire and transfer business knowledge and experiences, foster the exchange of business ideas, and help to develop fruitful business relationships.

A great deal of research has drawn upon the resource-based view to explain the adoption and utilization of BSS by start-ups. Stemming from this, some studies (for example Westhead, 1995; Kor & Mahoney, 2000; Adler & Kwon, 2002; Ucbasaran, Lockett, Wright & Westhead, 2003) have examined the driving role played by internal and external (in)tangible resources (like start-up's teams and external networking) regarding decisions surrounding BSS. Additionally, entrepreneurial behavior has also been recognized as an essential element of the decision process when BSS use is being considered (Gartner, 1985, 1989; Gustafsson, 2006).

But, in spite of all of this, very little is known about the specific contribution of entrepreneurs' behavioral inclination that is involved in the decision to employ BSS. Only a handful of studies have theoretically connected BSS use with attitudinal and behavioral elements related to the entrepreneur. Within this small group we find Burke & Jarratt's paper (2004), which considers the reliance on the self to explain BSS adoption; Audet & St-Jean's analysis (2007), that explores entrepreneurs' perceptual and attitudinal factors affecting their use of external support; Bennett's (2007), which addresses entrepreneurs' expectations when using BSS; Bennett & Ramsden's analysis (2007) about entrepreneurs' motivation to involve business associations offering BSS; and Foo's (2010), that

connects business teams' experience with support that is sought externally. However, to the best of our knowledge, there has not yet been any research that explores the entrepreneur's decision-making process as he or she weighs up whether to hire BSS or not: these processes are still a 'black box'.

In an attempt to complement previous insight into the use of BSS, and gain more understanding of the entrepreneurs' decision-making processes about these types of external services and programs, we have incorporated a behavioral perspective into the traditional resource-based viewpoint. By integrating the behavioral approach in the resource-based conceptual framework, we define a theoretical model for BSS decisions. Unleashed by entrepreneurial internal forces, the model contemplates a multi-stage decision process throughout which internal teams and also external networks play a relevant role. Then we validate the model with a representative sample of entrepreneurs who interact with a regional development agency based in Barcelona, Spain. We finish with a discussion of our findings, and comment on the results and our conclusions in this area of entrepreneurship.

Towards a more holistic picture of the decisions to use BSS

External BSS are relevant sources of knowledge, expertise and skills (Chrisman, 1999; Chrisman & McMullan, 2000, 2004; Aldrich & Ruef, 2006) that the entrepreneur might require when he or she is creating and growing his/her emerging business. They can enhance a new firm's strategic decision-making (Bennett & Ramsden, 2007), improve a firm's strategy implementation (Van den Ven *et al.*, 1984; Roper & Hewitt-Dundas, 2001), or resolve organizational issues (Chrisman & Leslie, 1989; Chrisman & McMullan, 2000). Among other advantages, BSS contribute to building a firm's capabilities (Mole & Keogh, 2009). Far from designing and offering a unique BSS mode that might meet an entrepreneur's particular needs (O'Farrell & Moffat, 1991; Fitzsimmons, Noh & Thies, 1998), BSS suppliers often provide a range of support services that include: services related to physical facilities or incubation spaces where the new organization can be based (Hackett & Dilts, 2004); coaching and counseling services (Abduh, D'Souza, Quazi & Burley, 2007); networking services that are conceived to foster and offer the opportunity to collaborate with other firms and institutions (Peters, Rice & Sundararajan, 2004); and additional services – like training and technology support – done through the internet and other new media (Lawless, Allan & O'Dwyer, 2000; Thomas, Packham, Miller & Brooksbank, 2004).

Resource-based view presents a theoretical framework to understand the utilization of BSS by entrepreneurs. From this perspective, external networks and contacts, such as scientific-based innovation agents, along with a firm's workforce and the owner's team, offer useful information and (in)tangible resources that help decide whether, or not, to use BSS (Ucbasaran *et al.*, 2003; Lockett, Ucbasaran & Butler, 2006). But this approach does not take into consideration either the BSS decision process itself, which remains as something of a black box, nor does it consider the impact of an entrepreneur's internal triggering forces over a BSS decision. Remarkably, consumer behavior and managerial decision-making theories (Engel, Kollat & Blackwell, 1968; Howard & Sheth, 1969) can provide a new perspective on this issue. Within this behavioral conceptual framework, the decision to use BSS is conceived as the result of a multi-stage process, let loose by the individual's motivation and previous experience, and throughout which he or she searches for and evaluates information about alternate services before making a decision (Hong & Sternthal, 2010; Kuskov & Villas-Boas, 2010; Mehta, Hoegg & Chakravarti, 2011).

Following the reasoning of these approaches, entrepreneurs are acknowledged as potential BSS users (Rice, 2002). They are influenced by forces that drive them from within, and they go through a decision-making process that tells them whether to use BSS – or not. Additionally, due to the complexity of BSS, plus the importance of these services when a new firm faces difficulties, BSS decisions make necessary the earlier development of searches for understanding what BSS are available (as seen in Figure 1). And yet influenced by the information and other (in)tangible resources provided by external networks and the start-up's team, this multi-stage sequence is born out of an entrepreneur's internal triggering force related to the entrepreneurs' own motivations or previous experiences (Hills & LaForge, 1992; Gardner, 1994; Hansen & Eggers, 2010).

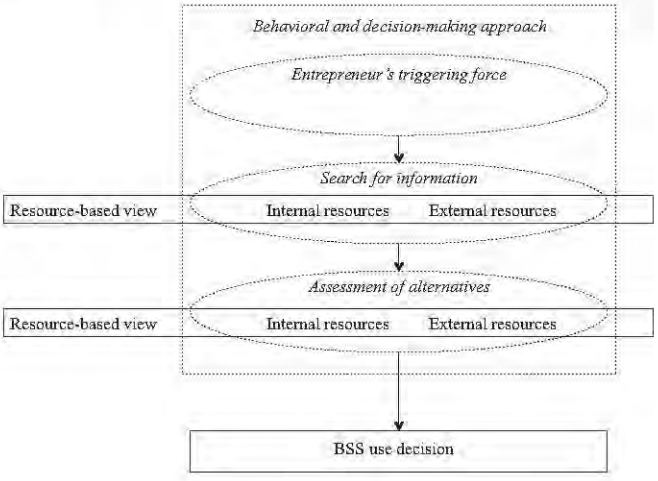


Figure 1: Integrative framework for BSS use decisions

Internal triggering forces

Behavioral research on BSS use decisions has underlined how personal experience triggers motivated individuals through decision-making processes (e.g. Hoch & Deighton, 1989; Yalch & Brunel, 1996), in order to satisfy their particular needs. Not surprisingly, an entrepreneur's previous experience of creating a business has been revealed to be a key element that influences decisions for start-ups

(Kets de Vries, 1977; Brockhaus, 1982; Westhead, Ucbasaran & Wright, 2009).

But the direction of the influence of prior experiences of searching for information has not been clarified, and only a few findings show that those entrepreneurs with little or no prior knowledge of BSS, or who are less familiar with BSS, might do fewer or simpler searches (Westhead, Ucbasaran & Wright, 2005; Gustafsson, 2006). Despite the scarcity of evidence, it seems reasonable to presume that entrepreneurs with greater experience will better understand information mechanisms, of all kinds, that are geared to the creation of a start-up (e.g. procedures to exploit internal information, and external entities who find information about potentially beneficial BSS). So more experienced entrepreneurs may bear lower search costs (Punj & Staelin, 1983; Alba & Hutchinson, 1987) and be more likely to engage in exhaustive searches (Westhead *et al.*, 2009). According to this line of reasoning, it is likely that an entrepreneur's prior experience helps in collecting information within the organization (Fiet, Piskunov & Patel, 2005; Fiet, Norton & Van Clouse, 2007) and exploring external information resources (Cooper, Folta & Woo, 1995; Westhead *et al.*, 2005), as stated in the following hypotheses:

H11 Prior start-up experience positively influences internal information search

H12 Prior start-up experience positively influences external information search

Information search and assessment

Following the rationale of user behavior in decision-making (Punj & Staelin, 1983; Johnson & Russo, 1984; Brucks, 1985), the flow of information about alternate BSS that might potentially deliver support to the start-up, can come from either internal or external sources. In any case, the assessment of this information can become a complex and resource-demanding activity (Gómez & Sánchez, 2005; Tihula, Huovinen & Fink, 2009), which requires the involvement of both internal and external agents. More precisely, the specificities and intricacies of the assessment of the information gathered – whether externally or internally – might require the involvement of all of the owners in the start-up's team (Kor & Mahoney, 2000; Ucbasaran *et al.*, 2003). Similarly, internal and external searches can imply a greater willingness to cooperate with scientific-based agents (Kleinknecht & Reijnen, 1992; Fritsch & Lukas, 2001; Tether, 2002; López, 2008), like universities and research centers, who can specifically assist with the acquisition of advanced knowledge (Belderbos, Carree, Diederen, Lokshin & Veugelers, 2004; Laursen & Salter, 2004).

Once involved in the assessment of the set of BSS available, the start-up's owner team can work with professional contacts (Cooper *et al.*, 1995; Westhead *et al.*, 2005) that facilitate collaboration with relevant "close agents", those agents that are found in the new firm's specific microenvironment (such as technology suppliers, consultants, industry-firm associations, and financial entities) to assess specific pieces of information about BSS (Cooper *et al.*, 1995; Tether, 2002; Belderbos *et al.*, 2004). In addition, and as research in inter-firm collaboration suggests, collaborative relationships with close agents in the microenvironment can continue to facilitate and pinpoint specific areas of cooperation when information is assessed with agents in scientific fields (Fritsch & Lukas, 2001). This is due to the usual perception of cooperative business relationships as complementary, rather than substitutive (Das & Teng, 2000; Bönte & Keilbach, 2005), and thus the willingness of firms already involved in collaborative activities to expand their current cooperative links with agents who might not be quite so near to hand, such as scientific-based institutions (Laursen & Salter, 2004). All of this leads to the following set of hypotheses:

H21 Internal information flows positively influence the participation of the start-up's owner team in information assessment

H22 External information flows positively influence the participation of the start-up's owner team in information assessment

H31 Internal information flows positively influence cooperation with scientific-based agents in information assessment

H32 External information flows positively influence cooperation with scientific-based agents in information assessment

H4 Owner team participation in the decision process positively influences cooperation with agents within the microenvironment in information assessment

H5 Cooperation with agents of the microenvironment in the decision process positively influences cooperation with scientific-based agents in information assessment

BSS use decisions

According to the decision-making rationale, the use of gathered information to assess the set of BSS available (Casson, 2005) may culminate in choosing the potentially best alternative taken into consideration, and utilizing it. However, as start-up's owner teams who are more involved in BSS decision-processes can provide the firm with relevant knowledge and (in)tangible resources for starting-up (Lubatkin, Simsek, Ling & Veiga, 2006), a substitution effect (Chandler & Hanks, 1998; Das & Teng, 2000) between the entrepreneurial owner team's participation, within the decision process, and the use of external BSS is expected.

Collaborating with scientific-based agents in evaluating alternative BSS can facilitate the assimilation of new knowledge about these external resources (Cohen &

Levinthal, 1980, 1990; Belderbos *et al.*, 2004). Eventually, the specialized knowledge provided by scientific-based agents may push forward the decision to use BSS, as it allows the entrepreneur to better define the set of alternate BSS to take into consideration and also to apply evaluative criteria to assess them – which in turn makes it easier to adopt subsequent decisions related to using BSS.

H6 Start-up's owner team's participation in the decision process negatively influences BSS use decisions

H7 Cooperation with scientific-based agents in information assessment positively influences BSS use decisions

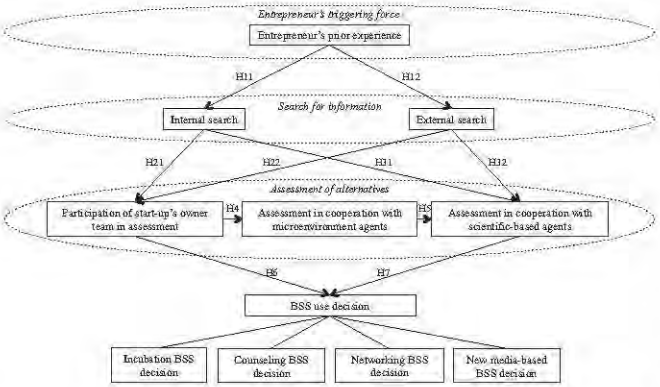


Figure 2: Theoretical model of BSS use decision process

Methodology

Scenario and data

A survey was launched in the universe of entrepreneurs (256 in total) who interact with a public development agency based in Barcelona, Spain, that serves the metropolitan region of Barcelona (Castells & Vilaseca, 2006). The agency, named Barcelona Activa, aims to promote the creation of new firms and helps with their consolidation by means of a wide spectrum of programs, services and activities, including an incubation center. Founded in 1986, this institution has become a reference, within the OECD area, in fostering business projects and promoting innovation to such an extent that it has become a role model for other institutions that promote entrepreneurship (Barcelona Activa, 2012). In fact, some of the brand new BSS created by Barcelona Activa have been later adapted and offered by analogous institutions (OECD, 2009).

Data was gathered between July 2005 and January 2006. During the first three months of that period, an online survey was sent out, along with two reminders to participate in the survey. Then a paper questionnaire was physically distributed to those entrepreneurs who had not filled in the online questionnaire. With a total response rate of 52.4%, a representative sample of 136 entrepreneurs was collected. After questionnaires were eliminated that did not have answers, the complete model was run using the data from 126 observations.

Measurements

The constructs and measurements used in the survey were adapted from those validated in previous relevant research, or developed on the basis of the literature review and two focus groups, one of which was with entrepreneurs and the other with institutional staff.

To measure the entrepreneur's previous experience, we considered whether the entrepreneur had already created a firm or not (e.g. Peña, 2002; Haynes, 2003). So we used a dichotomous variable that is zero (0) for entrepreneurs with no prior start-up experience and one (1) for those with at least some experience. The measurement of the external information search about potential BSS that could be used was based on Katila's (2002) number of information channels explored. Therefore, external search is an additive variable that reflects the number of external sources consulted, and ranges from zero (0 sources) to six (6 or more sources). Similarly, internal information search on BSS was measured through the number of full-time employees involved in searching internal information (Fariñas & López, 2006; Elche-Hotelano, 2011). This variable ranges from zero (0 employees) to six (6 or more employees). The participation of the owner team in the assessment of information was captured by means of the number of the start-up's owners involved (Ucbasaran *et al.*, 2003; Dautzenberg & Reger, 2010). The variable ranges from one to four, where four represents 4 or more owners. Cooperation with agents of the microenvironment in assessment activities was measured with an additive variable that expresses the number of different relations (Katila, 2002; Becker & Dietz, 2004) established for information assessment purposes with those agents (competitors, distributors, clients, technology suppliers and other suppliers). The variable ranges from zero (0 relations established) to five (relations established with 5 different types of microenvironment agents).

Analogously to Fernández-Ardèvol and Lladós-Masllorens (2011), scientific-based cooperation of the information assessment about BSS was measured by means of an additive variable that captures the intensity of those collaborative relationships with universities and other research centers. The variable ranges from zero (no collaborative relationship) to two (links to both universities and other research centers).

In order to capture the decision about BSS use, we modeled a latent variable, which we measure via four additive indicators. Each of these indicators reflects the degree of utilization of the four types of BSS previously identified: incubation BSS; coaching and counseling BSS; networking BSS; and new media-based BSS. Incubation scale labels range from zero (no participation in any activity or program conforming incubation BSS) to six (having taken part in 6 activities/programs of this category). Similarly, the variable that reflects BSS use of coaching and counseling ranges from zero (no participation in any activity or program of this category) to three; and using BSS for networking ranges

from one to two (where 2 represents the maximum number of activities/programs in this category in which the entrepreneur has taken part). New media-based BSS range from zero to seven (7 being the maximum number of new media-based BSS in which the entrepreneur has participated).

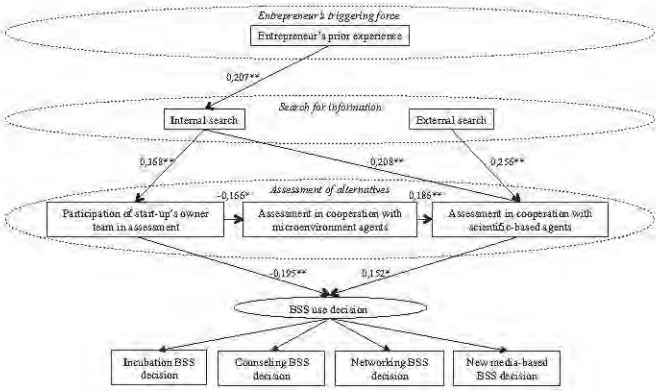
We have measured the construct validity of the unobserved latent variable by means of a principal components analysis (Nunnally & Bernstein, 1994) with varimax rotation. The resulting factor, which explains 69.6% of the variance, has an eigenvalue (2.784) clearly greater than 1. We have further tested the reliability of this measure through the Cronbach alpha coefficient, which takes a value (0.782) higher than the threshold of 0.70 (Hair, Black, Babin & Anderson, 2010).

Model estimation and results

In order to test the various levels of causation and the interrelations among the variables considered, we have analyzed a general nonlinear structural equation model. Structural equation models are regression models with observed and latent variables (Lee, 2007) that explain multiple interrelations among variables (Hair *et al.*, 2010). Due to the ordinal and interval nature of the variables taken into consideration (Albert & Chib, 1993; Lee & Song, 2003), we have used a Bayesian approach to estimate the parameters of the model. By means of Markov chains and Monte Carlo methods, Bayesian estimation also allows sample replication, making it especially appropriate and reliable for relatively small samples (Lee, 2007: 5), like this available here.

To examine the adequacy of the model in terms of statistical convergence, we have used Gelman and Rubin's (1992) potential scale reduction method – which compares the variance between and within Markov chains for the last n values from each chain – along with the analysis of posterior distribution graphics (not shown here for the sake of space). We have verified the model's goodness of fit and adequacy by means of the posterior predictive p-value (Gelman, Meng & Stern, 1996). And we have employed Bayesian credible intervals to test whether the estimated parameters of critical paths are significantly different from zero.

The model first converged with 5,501 iterations and, as recommended by Gelman et al. (1996), yielded a posterior p-value (0.49) not far from 0.50 (Lee, 2007: 129). But as the positive relation (0.124) between the previous start-up experience (PrExp) and the external information flows (EIF), as well as between EIF and owners' team participation (Team) (0.129), neither was significantly different from 0, so these two paths have been removed. After 4,647 iterations, convergence of the revised model parameters is reached, as well as the model's goodness of fit and adequacy (being 0.45 the Bayesian posterior p-value). Results are shown in Figure 3 (which includes direct standardized effects) and Table 2 (for the total standardized effects).



* Estimated parameters significant at 90%
**Estimated parameters significant at 95%

Figure 3: Parameter estimates for the analytical model

Since the path parameter linking previous start-up experience and internal search is positive and significantly different from zero (0.207), H11 is confirmed. By contrast, the relationship between PrExp and EIF (H12) is not supported. Moreover, the positive sign of total standardized effects, measuring the influence of PrExp on both Team (0.076) and scientific cooperation in the decision process (ScCoop) (0.041), allows confirming the positive impact of PrExp on the assessment of alternative BSS when it is mediated by internal information flows (IIF). However, no total effect significantly different from zero has been detected for PrEXp with the latent variable capturing the entrepreneur's decision about BSS use (UseDec), nor from PrEXp with the use of any type of BSS.

Table 2: Total standardized effects

	PrExp	IIF	Team	EIF	MiCoop	ScCoop	UseDec
IIF	0.207**	0.000	0.000	0.000	0.000	0.000	0.000
Team	0.076**	0.368**	0.000	0.000	0.000	0.000	0.000
MiCoop	-0.013	-0.061*	-0.166*	0.000	0.000	0.000	0.000
ScCoop	0.041**	0.196**	-0.031	0.256**	0.186**	0.000	0.000
UseDec	-0.009	-0.041	-0.199**	0.039*	0.028**	0.152*	0.000
Incubator	-0.008	-0.038	-0.185**	0.036*	0.026**	0.141*	0.927**
Counseling	-0.004	-0.021	-0.101**	0.020*	0.014**	0.077*	0.504**
Networking	-0.006	-0.027	-0.130**	0.026*	0.019**	0.100*	0.650**
New media	-0.009	-0.040	-0.194**	0.038*	0.028**	0.148*	0.971**

**Values significant at 95%
* Values significant at 90%

As the positive path parameter linking PrExp and EIF is not significantly different from zero, it is not possible to determine whether an external information search acts as an antecedent of activities related to the assessment of alternatives (owners' team participation, cooperation with microenvironment agents and scientific-based cooperation). However, the path parameter between EIF and ScCoop (0.256) is positive and significantly different from zero, supporting H32. EIF also positively affects the decision to use BSS when mediated by ScCoop. For its part, IIF positively and directly affects ScCoop (0.196). In addition, this influence is indirectly mediated by Team and collaboration with agents of marketing microenvironment (MiCoop). Despite that the indirect effects are not significantly different from zero, the total effects are. As a consequence, the hypothesis H31 is validated. And, as expected, the parameter linking IIF and Team is positive and significantly different from zero (H21). By contrast, the influence of EIF on Team is not statistically significant, leading us to reject H22.

Contrary to the expected direction, results show a negative sign of the parameter connecting Team with MiCoop (-0.166), refuting H4, as well as a negative total effect of the IIF onto MiCoop for BSS decisions (-0.061). By contrast, the corresponding parameter linking MiCoop and ScCoop (0.186) is positive and significantly different from zero, confirming H5. Further, MiCoop positively influences BSS use decision when mediated by ScCoop. And since the parameter corresponding to the influence of Team participation on the BSS use decision is significantly different from zero, and negative, H6 is also verified. The same happens when considering the path between ScCoop and BSS use decisions, although here the sign is positive, as it was presumed (H7).

Discussion and concluding remarks

In this study, we situate entrepreneurs and their freedom of choice at the very center of the decision processes that culminate with the use of BSS – those services and programs that are particularly oriented to provide support to entrepreneurial initiatives. In an attempt to offer further insights into how and what entrepreneurs do in the decision processes to use BSS, we suggest complementing the resource-based conceptual framework (usually employed by studies on BSS in the field of entrepreneurship) with a behavioral and decision-making approach. Within the resulting integrative framework, a decision process is proposed for BSS use.

Initially, a process is triggered by internal factors related to the entrepreneur's personal prior start-up experiences. It then develops throughout two consecutive stages during which internal and external resources play a relevant roll: in the first by providing information about alternate, potential BSS; in the second by facilitating the assessment of them. The process ends up with the effective decision of using a BSS.

As predicted, entrepreneurs' decisions about BSS portray themselves to be complex and reflexive: unlike typically simplistic and short decision-making processes driven by unplanned behavior, BSS decisions require high involvement from the entrepreneur, and evolve throughout the four differentiated phases previously identified (i.e. entrepreneur's triggering force, information search, alternative assessment, and BSS use decision). This provides support to our holistic view of entrepreneurs' decisions about BSS and shows, for the first time in the entrepreneurship literature, the appropriateness of a multi-stage framework to help deconstruct and predict entrepreneurial behavior with regards to the use of BSS.

Apart from this contribution, the empirical test undertaken also answers the call of some researchers in the field (Gustafsson, 2006; Baron, 2007). As a matter of fact, our results reveal entrepreneurs' cognitive factoring gained from prior similar experiences during the creation of a start-up, and which have to do with the familiarity and confidence of the BSS decision processes, that acts as a triggering force within entrepreneurs' decision-making behavior. More specifically, entrepreneurs' prior experiences of BSS-related activities are shown to prompt their willingness to gather informational resources about potentially useful BSS from within the organization. By contrast, and contrary to our expectations and those found by Westhead *et al.* (2005) and Gordon, Davidsson & Steffens (2009), entrepreneurs' familiarity and confidence with BSS that have been provided by experience do not directly encourage the search for information in external sources. Therefore it seems that experienced entrepreneurs do not consider it so necessary to resort to a wide spectrum of external information sources, which is indeed in line with findings gathered by Westhead *et al.* (2005). Nevertheless, the undertaking of an external information search, along with the search within internal sources, turns out to be a key activity in the decision processes for BSS use. As observed, and in accord with Fritsch & Lukas's (2001), Tether's (2002) and López's (2008), both types of searches (i.e. external and internal) determine the cooperation with scientific-based agents for BSS evaluating purposes, and this then opens up the decisions about BSS utilization. And so the knowledge and resources acquired thanks to the cooperation with scientific-based agents allows entrepreneurs to better identify business opportunities and evaluate those BSS that they could benefit from the most: ultimately this leads to the adoption of the corresponding BSS.

A booster of external cooperation with assessment purposes as external search is, it might be less of a drain on internal resources. This is because, unlike an internal search, it does not lead to the entire owners' team having to participate in assessing the information collected. For its part, diverse and concrete effects derive from the participation of the owners' team in the decision-making process. On the one hand, the undertaking of information search within the organization stimulates the involvement of the entire owner's team to assess it. And interestingly, the knowledge and resources provided by them turn out to be a substitute of those that would be obtained from external support services and

programs; so the owner team participation might eventually reduce the entrepreneur's willingness to use BSS, which is in harmony with Chandler & Hanks (1998) view of founders' role in emerging businesses. On the other hand, the owner's team participation indirectly affects BSS decisions because it discourages collaboration for assessment purposes with agents in the microenvironment. Again, this result suggests that when the owner's team is part of the decision-making process, it can heighten the relevant capabilities and expertise they might provide, which could reduce the new firm's need of collaborating with external agents who come from the microenvironment.

Our investigation also highlights evidence of the complementary effects of inter-firm collaboration, yet now within the context of BSS adoption. Similarly to some studies on strategic cooperation (Das & Teng, 2000; Belderbos *et al.*, 2004; Bönte & Keilbach, 2005), we found that, once external cooperation is established with close agents of the firm's specific environment, firms are more willing to grow their collaboration network with organizations, like scientific-based agents, that are not necessary to hand.

These insights not only offer an important backdrop for understanding entrepreneurial decisions regarding BSS use, but they also have relevant implications for policy makers, business incubators, and other public and private institutions that provide BSS. As a matter of fact, BSS providers can offer relevant information about their range of services and programs to their potential users as much as to other relevant key agents in the use of the decision-making process – such as scientific-based institutions and organizations within the new firm's microenvironment. BSS providers should equip those agents with informational resources and tools that allow them to deliver the appropriate help to entrepreneurs in their decision-making processes regarding BSS. This recommendation is particularly important when it comes to making BSS use decisions easier for entrepreneurs with little or no start-up experience, as they are, paradoxically, less likely to gather comprehensive information about BSS and therefore only carry out limited decision processes about BSS.

Our research not only shows that BSS decisions involve multi-step and selective processes but also that these processes are highly influenced by entrepreneurs' prior experience and knowledge. This suggests that there is not a single recipe for success of entrepreneurship policies in the modern knowledge economy. By the same token that entrepreneurs create new organizations adapted to the transformational changes of labor and product markets, the design and development of BSS should adapt to the changing and different motivations and needs of entrepreneurs.

This investigation, however, is not exempt from limitations. As with many other studies on BSS, sample data has been collected from entrepreneurs linked to only one institution. Furthermore, it is recommended that future studies consider entrepreneurs' behavior in BSS post-usage stages. It would be relevant to do an in-depth study of prior experience in firm creation, and also explore possible different BSS decision-making behaviors among experienced serial entrepreneurs (who have sequentially created various firms) and experienced portfolio entrepreneurs (who simultaneously own multiple firms). In addition, the present research might be extended beyond a general analysis of entrepreneurs' decisions on BSS use to its modeling for decisions on particular BSS services and programs. Last but not least, it would be worthwhile to regard the specific role of each type of external agent with whom the new firm cooperates within BSS decision-making processes.

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