The Influence of Organizational Capital on the Conception of the Enterprise Project

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ABSTRACT

The present study seeks to evaluate the influence of organizational capital on the conception of enterprise projects in the first stages of the entrepreneurial adventure. This work rests on the application of the theory of human capital and the theory of social capital. Two variables are the object of examination: the level of ambition of these projects and their degree of realism. The influence of human capital and of social capital is measured from the beginning of the enterprise project using financial projections made by the creators at the stage of the business plan. Based on tests of hypotheses made on an original sample of 125 business plans of enterprises in the creation stage, the results show the influence of human capital and of social capital on the conception of enterprise projects. In particular, the importance of the functions served before the creation of the actual enterprise, the presence of a former director (or of a serial entrepreneur) on the team of creators and the force of the social resources of the entrepreneurs have a positive influence on the level of ambition of the project, whereas the proportion of women on the team play an opposite role. Moreover, the size of the team of entrepreneurs and the force of their social resources is positively correlated to the realism of the project, whereas the average level of functions previously served by the creators, the average duration of their studies and the proportion of women on the team play an opposite role.

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I.   INTRODUCTION

According to Shane and Venkataraman (2000), an entrepreneurial project consists of two processes: discovery and exploitation of opportunities. For the project to succeed, the entrepreneur must assemble two types of resources: know-how, represented by human capital, and social capital.

The success of entrepreneurial projects is a central question that is of interest, of course, to the entrepreneurs themselves but, more broadly, to the set of stakeholders, including the financiers such as business angels, venture capitalists and bankers. In France, the five-year survival rate of newly created enterprises is approximately 50%[1]. From this perspective, a certain number of works have sought to identify the criteria that could explain the success or failure of an entrepreneurial project. For example, Tyebjee and Bruno (1984) and MacMillan (1977) listed the criteria used by venture capitalists to select the entrepreneurial projects in which to invest. Other studies have themes of understanding the success of projects ex post (for example, Lasch et al., 2005). Meanwhile, a few works have examined the chances of success of projects ex ante, based on the characteristics of the projects, particularly as a function of their degree of ambition and degree of realism.

The object of the present research is to understand how the human capital and the social capital of founders affect the conception of the enterprise project, particularly the degree of ambition and realism of the project. Thus, this article provides two novel elements. First, the research question is asked in the very early stage, that is, from the conception of the business plan. Next, this research uses the theories of human capital and social capital to understand how they contribute to explaining the conception of the enterprise project.

This research study therefore seeks to show how the characteristics of the founder, together with other external factors, can explain the characteristics of the creation of the project, particularly its ambition and its realism.

We shall first present the theoretical framework, followed by the hypotheses of the research. Then, we shall present the methodology. Finally, the results will be analyzed and discussed.

II.   THE THEORETICAL FRAMEWORK: THE INFLUENCE OF THE ORGANIZATIONAL CAPITAL OF THE ENTREPRENEUR

Entrepreneurship can be considered to consist of two processes: the discovery of business opportunities and their exploitation (Shane and Venkataraman, 2000). Recent conceptions of entrepreneurship are based on resources (Alvarez and Barney, 2004, Alvarez and Busenitz, 2001). To exploit an opportunity when it appears, the entrepreneur must assemble the necessary resources and find a way to organize these resources to extract the value of the opportunity. This process requires having access to these resources to generate the profits associated with a market opportunity and doing so in a way that enables the economic actor to collect at least part of the profits that have been generated (Alvarez and Barney, 2004). Among the resources available to the entrepreneur are his human capital and his social capital.

A.   Human Capital

The theory of human capital postulates that individuals who have more or better-quality human capital achieve better performance in the execution of certain tasks (Becker, 1975). From an entrepreneurial perspective, human capital refers to the knowledge and skill sets that enable a person to engage successfully in the creation of activities or enterprises (Davidsson and Honig, 2003; Snell and Dean, 1992). Human capital is composed of both generic and specific human capital.

1.   Generic Human Capital

Generic human capital consists of the knowledge, skill sets and ability to solve problems that are transferable to different situations. Generic human capital typically corresponds to education (Rauch and Frese, 2000). In an entrepreneurial context, generic human capital is valuable because it facilitates the accumulation and integration of new knowledge, offering the founders a wide palette of opportunities that help them to adapt to new situations (Cooper et al., 1997).

In the literature, generic human capital can be measured by the level of education, which depends on the number of years of schooling (Gimeno et al., 1997; Wiklund and Shepherd, 2008). According to this measure, the higher an individual's level of schooling, the more dedicated and hard-working the individual will be in an entrepreneurial project. Conversely, over-investment in education can discourage risk taking (Davidsson & Honig, 2003). We thus obtain a bell curve to characterize the relation between the number of years of study and the probability of founding an enterprise.

Generic human capital also depends on the composition of the management team, its manner of functioning and its prior experiences. The majority of studies confirm the hypothesis that the success of a project, through the growth of turnover and employment, is positively influenced by the fact that the enterprise is managed by a heterogeneous team and/or that certain members have a common prior work experience.

2.   Specific Human Capital

Whereas generic human capital can be generalized independent of context, specific human capital cannot. In an entrepreneurial context, specific human capital refers to the education, training and experience that will be valid in entrepreneurial activities but will have few applications outside this domain (Becker, 1975; Gimeno et al., 1997). In the entrepreneurial literature, the element of specific human capital that has been the subject of the largest number of works is prior founding experience (Carter, Willians and Reynolds, 1997; Florin, Lubatkin and Schulze, 2003; Stuart and Abetti, 1990).

The experience available to serial entrepreneurs offers them a level of expertise in business development (Wright, Robbie and Ennew, 1997) and gives them reference points to assess the relevance of information (Cooper, Folta and Woo, 1995) that can enable them to have a better understanding of the real value of opportunities for new enterprise creation processes, to accelerate the process of the creation of enterprises and to improve their performance (Davidsson and Honig, 2003).

Education and experience in management have a notable influence on the ability of entrepreneurs to receive financial resources (Hsu, 2007). In the stream of works based on the influence of human capital (Becker, 1975), Bates (1990) and Robinson and Sexton (1994) claimed that the level of education was correlated with the significance of the financial resources received for enterprise projects.

The expertise of the director can be measured through his prior experience (in the sector, in management, research and development, marketing and consulting or in an institute of higher education), the size of the enterprise where he worked in the past, his founding experience (whether he is a serial entrepreneur), the number of enterprises he has owned or managed, his other occupations besides founding businesses and his family background (coming from the family of an entrepreneur, being connected to the founder). The results of Janssen (2002) show that only four variables connected to the director's expertise have a significant effect on the growth of the employment of his firm:

• Experience in marketing, sales or research and development has a negative influence on the growth of employment because the director prioritizes the growth of turnover over that of employment.

• Consulting experience positively influences the probability of growth in employment.

• Having other activities at the time of creation has a positive influence on the growth of employment because he is not dependent solely on the revenues generated by his enterprise.

• Having pursued studies connected to the activities of the enterprise contributes positively to its development.

Some of these variables were also tested by Lasch et al. (2005) to measure their effects on the growth and survival of enterprises in the ICT sector. The results indicate that the size of the enterprise where the founder worked before the creation of this new enterprise plays a role. According to this study, those founders who worked in small and medium enterprises (SMEs) succeed more than those who worked in large enterprises.

B.   Social Capital

Economic behavior, such as entrepreneurial activity, is contingent on networks of interpersonal relations, which form the basis of the social capital of an individual (Granovetter, 1985). These networks are defined by a collection of actors (individuals and organizations) and by a collection of ties among them (Hoang and Antoncic, 2003). According to Lin et al. (1981), social capital can be considered as a resource tied to a relational network. Social networks are represented by the family, the community and the organizational relations. The theory of social capital concerns the ability of actors to extract resources from their social networks (Lin et al., 1981).

From an entrepreneurial perspective, social capital refers to the collection of interpersonal and inter-organizational relations through which entrepreneurs have access to a variety of resources necessary for the discovery and exploitation of business opportunities and the success of the enterprise (Davidsson and Honig, 2003; Wiklund and Shepherd, 2008). Social capital is generally represented by the type of relationships among networks, the strength of ties, the frequency of meetings and family and social

relations. The relational network represents the possible ties at the personal and organizational level. These ties can be direct or indirect and have varying intensities. In this context, friendship and faith are particularly significant in facilitating the transfer of information and knowledge that are costly to obtain by other means (Wiklund and Shepherd, 2008). They create opportunities for the exchange of goods and services that are difficult to obtain by contractual agreement. In particular, the founders use their contacts to obtain access to resources and facilitate the process of creation.

The advantages of the network of an enterprise are due to significant and frequent social exchanges between the entrepreneurs and those in their network. Moreover, the works of Davidson and Honig (2003), as well as Wiklund and Shepherd (2008), show a positive correlation between belonging to a business network and engaging in an entrepreneurial process. In effect, the founders use their contacts to obtain access to resources and facilitate the process of creation.

The role of social capital in the acquisition of resources by a young enterprise has also been explicitly demonstrated. Fried and Hisrich (1994) have demonstrated through case studies that, as investors receive many business plans to finance, social connections play a significant role in the determination of those that will receive financing. These results suggest a process in which investors have a tendency to finance entrepreneurs they hear about, either from founders of other companies that are already in their portfolios or from their fellow investors, close friends or family. Based on a study of 202 venture capitalists in the priming phase, Shane and Cable (1998) claimed that the direct and indirect connections between entrepreneurs and investors affect the selection of projects to be financed. Moreover, Shane and Stuart (2002) claimed that entrepreneurs with social capital consisting of pre-existing direct or indirect connections with venture capitalists have a higher probability of receiving financing in the first stages of the life of the enterprise.

C.   The Characteristics of the Project

The characteristics of a project have, likewise, been considered by many researchers as a major determinant of the success or failure of the creation of a new enterprise.

Since 1984, Tyebjee and Brujo identified 23 criteria used by venture capitalists (VCs) and classified them into 5 categories: 1) the attractiveness of the market (existence, size, growth, and accessibility), 2) the product differentiation (uniqueness, protection, high level of profitability), 3) the managerial capacity, 4) the external barriers (barriers to entry, technological development) and 5) the potential cash out for the VCs.

In 1987, MacMillan et al. established a list of 25 criteria used by VCs to analyze and study their choice of investments in young enterprises. These criteria were classified into four categories: the characteristics of the entrepreneurial team, the characteristics of the product, the characteristics of the market and the financial characteristics of the young enterprise. Later, Kakati (2003) extended this analysis by adding 13 new criteria and two new categories: basic resource capacity and competitive strategy.

A few authors (Koschatzky, 1997; Seeger, 1997; Lasch et al., 2005) emphasize the significance of the number of customers (degree of dependence), the nature of the customers (private customers, public institutions, and other companies) and the

geographic location of the customers. According to the works of Lasch et al. (2005), the enterprises that succeed are more heavily present in national markets than those that fail. The latter are more heavily present either in local markets or in international markets. These authors also emphasize the importance of localization as an explanatory factor of success or failure. They consider that founders should choose their location as a function of economic rather than personal criteria.

Finally, in a recent meta-analysis, Song et al. (2008) identified 24 factors explaining the success of a young enterprise and classified them according to three categories: 1) market and opportunity, 2) entrepreneurial team and 3) resources. There are nine market and opportunity factors, including competitive intensity (Chamanski and Waago, 2001), dynamism and competitive heterogeneity (Zahra and Bogner, 2000), internationalization and low-cost strategy (Bloodgood et al., 1996), growth rate and market size (Bloodgood, Sapienza, and Almeida, 1996; Lee, Lee, and Pennings, 2001, Li, 2001; Marino and De Noble, 1997) and marketing intensity and product innovation (Li, 2001). The entrepreneurial team factors include industry experience (Marino and De Noble, 1997), marketing experience (McGee, Dowling, and Megginson, 1995; Marino and De Noble, 1997), start-up experience (Marino and De Noble, 1997) and R&D experience (McGee, Dowling, and Megginson, 1995; Marino and De Noble, 1997). Finally, Song et al. (2008) identified nine criteria regarding resources: financial resources (Robinson and McDougall, 2001), the age, size and type of the enterprise (Zahra et al., 2003), non-governmental support (Lee, Lee and Pennings, 2001), trademark protection (Marino and De Noble, 1997), alliances and investments in R&D (Zahra and Bogner, 2000; McGee, Dowling, and Megginson, 1995), university partnerships (Zahra and Bogner, 2000; Chamanski and Waago, 2001), size of the management team (Chamansko and Waago, 2001) and supply-chain integration (George et al., 2001; George, Zahra, and Wood, 2002; McDougall et al., 1994).

D.   The Control Variables

The majority of studies use other variables to analyze entrepreneurial projects. This last category corresponds primarily to demographic variables and variables connected to the preparation of the project. Some studies use the demographic variables as control variables, whereas others consider them to be at the heart of human capital, such as gender.

The two most common categories of control variables relate to the following:
•   The demographic dimension, such as the age and gender of the founder or his membership in an ethnic minority. The results of several studies have found that the age of the founder has a negative influence on the growth in employment of his firm. At the same time, Janssen (2002) and Lasch et al. (2005) conclude that age cannot be a significant determinant, in contrast to gender. Almost all studies claim that if the founder is female, it has a negative influence on the success of the enterprise. As regards ethnic identity, in contrast to Dahlqvist et al. (1999), Janssen posits that if the director is an immigrant, it has a positive influence on the growth in employment of the enterprise.
•   The preparation process dimension: to measure the effect of the preparation process on the success of the enterprise, studies consider several different indicators, such as the existence of a business plan, a technical and financial feasibility study, the

number of potential clients and the number of meetings with consultants (in the framework of a support process).

The results of these studies diverge. Some studies confirm the hypothesis that good preparation has a positive influence on the success of the project; others demonstrate the opposite. For the latter, this process is a waste of time and money and can slow down the liftoff process.

III.   THE HYPOTHESES

Our research is focused on the very earliest phase of a business, that is, at the conception of the business plan for the enterprise. These business plans were evaluated by professionals. We are working with the personal data of the founders and the provisional data that appear in the business plans. We apply the theories of human and social capital to understand how they contribute to explaining the conception of the enterprise project in two dimensions: its ambition and its realism.

A.   Ambition of the Project

The key element in a foundation project is its ambition, as this determines the magnitude of the resources to be mobilized. We assess the ambition of the project based on its size (turnover and number of employees) as well as the financing necessary to launch it.

It appears that a three-year turnover for the project is the most representative variable for its ambition, as investors generally evaluate this type of project by considering their three-year potential. Moreover, the visibility for this type of innovative project for which the market does not exist yet is generally too weak[2]. Furthermore, not all the founders have the same vision for the progression of turnover between one and three years. Some have a more linear approach, while others take a more exponential approach. We therefore formulate the following two hypotheses:

H1:   The ambition of the project depends on the human and social capital incorporated in the project.
H1a: The anticipated 3-year turnover of the project depends on the human and social capital incorporated in the project.

Among the explanatory variables, we believe that human capital should have an influence on the turnover expected in three years. In particular, expertise, represented by the sum of the mean functions, and the presence of a director in the entrepreneurial team should be significant. According to Dahlquist, Davidsson and Wiklund (1999), experienced entrepreneurs are better at judging very early whether an idea will bear fruit. According to Cooper et al. (1994), education can contribute to a high growth rate. Barringer, Jones and Neubaum (2005) found that companies with rapid growth are created by entrepreneurs who are more educated and have entrepreneurial experience and experience in the industry.

Finally, we anticipate a negative relation between gender and the anticipated three-year turnover. In effect, the more women that are on the team, the less significant the three-year turnover should be. This result indicates that the level of ambition of

female founders is lower than that of their male counterparts. According to the works of Cooper et al. (1994), gender is uniquely significant in the growth equation. Brush (1992) determined that it is more common for women entrepreneurs to pursue other objectives in addition to economic objectives. For Brush, male entrepreneurs may be better positioned in networks and can thus benefit from better access to suppliers and customers.

With respect to social capital, according to the results of Davidsson and Honig (2003), it seems that being a member of a business network has positive effects on sales. We thus anticipate a positive influence of this variable.

With respect to the other variables connected to the project, we anticipate positive correlations with size criteria such as the customer base and the working capital, the effects of which could be nuanced by the sector of activities and the "commercial implantation" variable.

The second criterion to measure the ambition of the project is the number of employees. It seems that the variable "Employment at three years" is the most representative variable because, as in the case of turnover, the actors (entrepreneurs, investors and grant providers) consider the potential job creation of a project at a horizon of three years, which they consider together with the projected turnover at three years and the type of activity as some are less labor intensive, particularly in the service industries.

The basic idea is that employment at three years depends primarily on two factors. The first is the experience of the entrepreneur, that is, the more experienced he is, the better his perception of the human resource needs in the development of his enterprise. The second is the sector of activity, that is, whether it is labor intensive. We deduce the following hypothesis:

H1b: The anticipated number of employees at 3 years depends on the human and social capital incorporated in the project.

Within the group of explanatory variables representing human capital, we anticipate a positive relation with the variables connected to experience and education. According to Davidsson and Honig (2003), the most significant element in terms of human capital turns is the tactical knowledge acquired in a prior start-up creation experience. For Rauch, Frese and Utsch (2005), the impact of education and the experience of entrepreneurs on employment has been widely studied in past years (Cooper et al., 1994; Dyke, Fischer, & Reuber, 1992; Lussier, 1995; Reynolds & Miller, 1989; Van de Ven, Hudson, & Schroeder, 1984). A positive relationship is generally found when examining the articles of Sandberg and Hofer (1987), Preisendörfer and Voss (1990), Cooper and Gimeno-Gascon (1992), Rauch, Frese and Utsch (2005), Bruederl et al. (1992), Chandler and Hanks (1994) and Cooper et al. (1994). Thus, these authors concur that the human capital of entrepreneurs has a positive effect on the number of jobs created in the entrepreneurial firm.

Regarding the influence of social capital, according to Bosma, Van Praag, Thurik and de Witt (2004), relations with other entrepreneurs within networks have a positive effect on the number of jobs created by the entrepreneur. Overall, the authors conclude that social capital has a positive effect on the performance of the newly

created business. Thus, social capital should have a positive influence on the projected three-year enrollment.

With respect to the other variables connected to the project, we expect a positive relationship with the working capital as it is a criterion connected to the model and the size of the project. The sign of the correlation with the variable determining the sector of activity is indeterminate a priori because the objective, in terms of employment, depends on the activity above all, that is, the intensity of the human resource.

Finally, the ambition of the project is approached in terms of financing. The variable "Total financing", as the collection of resources to be identified, is connected to the size of the project but also has a dual character, as this variable can be understood as a measure of the realism of the project. In effect, potential investors cross the ambition variables; for example, the three-year turnover is crossed with the financial means necessary to realize this objective. The human and social capital of the entrepreneur influences his ability to raise funds. Hence, the following hypothesis is presented:

H1c: The total financing of the project depends on the human and social capital available to the project.

Among the explanatory variables representing human capital, we anticipate a positive relation with the variables connected to experience and education. In effect, the more detailed knowledge the founders have of the processes of financing start-ups, either by education or experience, the better able they are to develop their business plan and their financing plan as a function of the size of their business.

Here, once again, we expect a negative effect of the gender variable. In effect, the more women on the team, the less significant the requested financing. This result tends to suggest that the degree of ambition of female founders is less than that of their male counterparts.

In addition, we anticipate that social capital will have a positive influence on the total financing of the project. In effect, the more powerful the network of the team of founders, the easier it will be to acquire external financing, such as equity and debt. Florin, Lubatkin and Schulze (2003) found there is a positive relation between the human and social resources of an enterprise and its ability to accumulate finance capital before its IPO. Gimmon and Levie (2009) similarly found that the probability of attracting external capital depends on the management experience of the entrepreneurs but not on their technical experience.

Among the variables connected to the nature of the project, we anticipate positive relations with the variables "Customer base" and "Working capital" because they are connected to the size of the project. However, as the size of the project grows, the demand for financing also grows. These effects can be nuanced by the variables "Commercial implantation" and "Sector," which do not necessarily depend on the size of the project.

It is now convenient to examine the hypotheses connected to the realism of the project.

B.   Realism of the Project

After evaluating the ambition of the project, we consider the hypotheses concerning the level of realism of the project in terms of two dimensions: the anticipated financing structure and the anticipated delay before attaining profitability. We explain these two dimensions in terms of the theories of human and social capital, together with characteristics connected to the project itself. We thus formulate our first hypothesis as follows:

H2:   The realism of the project depends on the human and social capital incorporated in the project.

The variable "Debt over total financing" is generally one of the most representative variables of the realism of a project because it is considered by bankers and investors as an essential element of the financial equilibrium of the project and the engagement of the entrepreneur.

In practice, bankers only finance up to a debt ratio of 1 to 1 for projects of the type of the Reseau Entreprendre Paris (Paris Entrepreneurship Network) (i.e., 100 in bank loans granted for 100 in equity). Moreover, it is for this reason that the initiative of this network was launched because the unsecured loan that it grants is considered by bankers as a complement to equity, which enables a leverage effect in obtaining bank credit. Thus, we arrive at the following hypothesis:

H2a: The proportion of debts in the total financing depends on the human and social capital incorporated in the project.

Among the explanatory variables representing human capital, we anticipate a doubly negative effect of the variable "Number of founders." In effect, the more founders there are, the more equity they can bring in and, as a consequence, the greater the proportion of equity in the total financing; therefore, the ratio "Debt over total financing" decreases. Moreover, the more founders there are, the more both the business plan and the financing plan become the objects of critical evaluation among the team members. This consensus leads to a greater realism about the structure of the financing of the project.

According to Cooper et al. (1994), the level of capital contributes to the marginal survival and growth. This capital has direct and indirect effects on performance. The direct effects include the ability to buy time, take on more ambitious strategies, change course and respond to financial needs resulting from growth. Regarding the indirect effects, the accumulation of capital may reflect better training and more extended planning on the part of the entrepreneurs. The works of Cooper et al. (1994) indicate that the number of founders emerges as a significant factor in attaining strong growth. In effect, strong growth is more difficult to achieve and more dependent on the availability of resources and knowledge. The benefits associated with the presence of multiple founders include the accumulation of capital, functional expertise and a wider base of managerial experience. There may also be psychological benefits as founders can each support each other. The creation of such a team may also lead to planning, evaluation and greater refinement of the preparation of the launch of the company.

We also expect a positive effect of the gender variable, meaning that women are more realistic concerning the structure of financing than men even though they engage in less ambitious projects. This theory is coherent with the literature review; almost all works claim that the femininity of the founder has a negative influence on the success of her firm (Jenseen, 2002; Lasch et al., 2005).

Finally, the influence of the variable "Sum of mean functions" seems uncertain because of a double effect. On the one hand, greater experience of the founders should provide greater realism in constructing the initial financing plan. However, the more experience the founders have, the better they know the banking finance circuits, thus inspiring confidence among bankers. The founders could perceive this experience as an advantage when asking for credit compared to other founders.

With respect to social capital, we expect a negative influence of the variable "Social connections" (GEvsUniv) on the proportion of debt in the total financing. In effect, the wider and more powerful the social network of the entrepreneurial team, the more informed the entrepreneurs are about the various financing possibilities, including grants considered as equity. Thus, they will have better developed relations with potential external equity investors (for example, business angels) and will be more familiar with the approaches of this type of financier. All of these contributing factors should lead founders to construct more realistic financial projections.

For the variables connected to the type of project, we anticipate a negative effect of the variable "Sector" (sector of activity) and the variable "Commercial implantations." In effect, the more the project expects commercial implantations (stores or restaurants), the lower the proportion of debt.

Finally, we consider the breakeven point, which corresponds to the necessary delay, anticipated by the founders, to achieve profitability. This variable is representative of the realism of the project and the viability of the project. It depends primarily on the type of project and, more specifically, on its business model, which itself depends on the sector. On the other hand, this variable can be manipulated by the founders, either because they are too optimistic about the potential market and the ability of their enterprise to acquire customers or because they understand that the cycle of investment of equity providers requires a reasonable delay for profitability. In practice, the projects presented at the Réseau Entreprendre Paris rarely have breakeven points beyond three years. We, therefore formulate the following hypothesis:

H2b: The breakeven point of the project depends on the human and social capital incorporated in the project.

In general, it appears, according to Cooper et al. (1994), that performance depends positively on the level of education. A higher level of education can lead to acquiring problem-solving abilities and reflects certain qualities of commitment through a combination of engagement, motivation and discipline.

For the explanatory variables representing human capital, we believe that a positive relationship with experience and/or the sum of mean functions should appear. In effect, the variable "Experience" is correlated with the variable "Customer base" because we observe, in general, that there are very few young project leaders (new graduates) who throw themselves into B-to-B markets because they are not familiar with them.

Davidsson and Honig (2003) find that social capital variables are not very statistically significant, even if the majority of the coefficients are positive. This result is surely a consequence of their methodology, which consisted of evaluating the probability for the newly founded enterprise to display a profit over the course of the study.

Among the project type variables, the variable "Sector" (sector of activity) should have a negative sign because the farther you go downstream in the value chain of a sector, the shorter the breakeven point should be. Likewise, with the variable "Commercial implantations," the more implantations the project has, the longer the time to break even is. Finally, for the variable "Customer base" (B-to-B or B-to-C), we hope for a positive sign. In effect, it is harder and slower to acquire a B-to-C customer base than a B-to-B base. The modes of communication and advertising are different, and the prospects are easier to identify and obtain in the case of a project of type B-to-B. For the variable "Working capital," the more short-term financing the project requires, the longer the breakeven point.

IV.   METHODOLOGY OF THE STUDY

We shall first present the method of sample composition and then the choice of indicators corresponding to each variable.

A.   Sample Composition

The data were collected from Réseau Entreprendre Paris (Paris Entrepreneurship Network). This network was created in 1986 in the north of France by Andre Mulliez, the founder of Auchan, a distribution group of French origin that has achieved global size. The objective in creating this network was to participate in the economic redynamization of the north of France by finding and helping founders of enterprises that would become the employers of tomorrow. His goal was to participate in the emergence of small to medium enterprises that would create value and jobs in all sectors of activity. This network developed progressively in the other regions of France.

The principle of this network is as follows. It consists of a private network of business leaders who volunteer to help the founders of potential enterprises. Each local club solicits business plans from founders of enterprises. The method consists of three stages. In the first stage, the projects are preselected by a functionary, assisted by the business leaders in the network, based on the following criteria: the abilities of the entrepreneur, the maturity of the idea and its coherence and feasibility. In the second step, the definitive investment decision is made by an engagement committee including six to eight business leaders in the network. The winner receives, at this stage, an unsecured loan from the association for a total between 15 and 50 K€. This loan is personal, does not carry interest and requires no guarantee. This loan, by attribution, enables a lever effect with banks to obtain medium-term credit. The third stage is that of support. All founders receive monthly support for three years from a member of the network, himself a business leader. The goal of this support is to give the enterprise founder someone to talk with and someone from whom to seek advice.

The current study considers the business plans received from Réseau Entreprendre Paris between 2006 and 2008. The data collection was performed in 2009

and the data analysis in 2010. Some 302 business plans were evaluated. Cases of repeat businesses were eliminated, as were business plans for which the usable data were incomplete.

The data collected concerned both the profiles of the founders and the characteristics of the enterprise projects as follows:

• Data on the founder's age, education (level and type), prior professional experience (positions held, durations, size and sector of the businesses), entrepreneurial experience and presence of entrepreneurs in their families;

• Data on the project's sector of activity, need for global financing, level of debt, size of the loan requested, projected turnover at 1, 2 and 3 years and intent to hire employees at 1, 2 and 3 years.

The final sample consists of 125 business plans with complete data. It is now convenient to specify the choice of indicators chosen for the collection of variables considered.

B.   The Choice of Indicators

We shall first present the choice of indicators for the dependent variables and then those for the independent variables.

1.   The Dependent Variables

Two dependent variables were chosen: the degree of ambition of the project and its degree of realism.

a.   The degree of ambition of the project

To evaluate the degree of ambition of the project, we used three distinct, but complementary, measures: the turnover anticipated in the business plan (BP) three years after launch, the number of collaborators (founders and employees) anticipated in the BP after three years and, finally, the total financing anticipated by the founders at the moment the project is launched.

b.   The realism of the project

To evaluate the degree of realism of the project, we have used two distinct measures: the proportion of debts in the total financing and the breakeven point (delay anticipated by the founders before achieving profitability).

We shall now present the indicators chosen corresponding to the independent variables.

2.   The Independent Variables

Three classes of independent variables were identified: those relating to human capital, those relating to social capital and, finally, those connected to the intrinsic characteristics of the projects.

a.   ***Human capital***

To measure the human capital, we used a series of measures:
- Number of founders: the number of founders of the project in question.
- Gender of the team: the entrepreneurial team can be male (M), mixed (I), or female (F).
- Average age: the average age of the different members of the entrepreneurial team.
- Level of study per project: a variable corresponding to the average number of years of higher education of each of the members of the entrepreneurial team.
- Nature of education of the team: if the collection of members of the entrepreneurial team received a managerial education, then the code is M; if they received a scientific or technical education, then the code is T. If the entrepreneurial team integrates managers and scientists/technical people, the code is M. Finally, in other cases, the code is A.
- Sum of mean function: positions held by each founder of the team before founding. For this variable, a total number of points for each founder was constructed at the level of the team. An entrepreneur with direction, founding or management experience receives three points, one who was in consulting or technical fields receives two points and all others receive one point.
- Presence of a former director on the team: a binary variable with one point if the team includes at least one former business director, zero points otherwise.
- Presence of a serial entrepreneur on the team (Serial entrepreneur): a binary variable with one point if the team includes at least one serial entrepreneur, zero points otherwise.

b.   *Social capital*

To measure the impact of social capital, we shall use a measure of the relational network of the founders. In the French framework, many professional and academic studies[3] have shown that the relations forged during the period of study play a significant role, particularly in view of the role of the French "Grandes Ecoles" in the educational system and of degrees from these schools in the governing structure of enterprises.

We define the variable "GEvsUniv" depending on whether the founders on the team studied at a Grande Ecole, a university or a combination of both. This variable represents the sum of the points of the members of the entrepreneurial team. An alumnus of a Grande Ecole receives two points, an alumnus of a university receives one point and the others do not receive a point. The underlying idea is that the "Social network" of founders who went to a Grande Ecole (alumni networks, for example) should be better than that of the founders with only a university degree or education from some other institution.

c.   ***The variables connected to the project***

Finally, we have included four control variables connected to the intrinsic characteristics of the project:

- Sector represents the sector of activity: industrial sector (I), publishing sector (E), software sector (L), internet sector (W), sector of restaurants and cafés (R), service and consulting sector (S) and commercial sector (C).
- Commercial implantation: a binary variable equal to 1 if the project intends to create commercial installations, 0 if not.
- Target clientele (B-to-B or B-to-C): this is a variable that takes the following values: (1) if the clientele is business to business, (2) if the clientele is both business to business and business to customers and (3) if the clientele is business to customers.
- Amount of working capital required (BFR): the total in thousands of euros of working capital necessary for the project during the first three years.

It is now convenient to present the results of the empirical test.

V.   EMPIRICAL RESULTS

We shall first present the results of the tests of those hypotheses connected to the degree of ambition of the projects and then present the results related to the degree of realism of the projects.

A.   The Ambition of the Project

The ambition of the project is approached in this study from the perspective of the three-year turnover, the number of jobs at three years and the total financing required over 3 years (CA3). We have therefore constructed three equations to explain these three dimensions of ambition in terms of the variables of the human and social capital of the founder and the intrinsic characteristics of the projects.

For the expected turnover at three years, the following human capital variables are significant:
- Gender of the team: negative. We can conclude that women have a less ambitious vision of projects, either because they are more realistic or because they prioritize elements other than the growth of their company, such as employment or profitability. This result confirms those of the works of Brush (1992) and de Cooper et al. (1994) regarding the influence of gender in entrepreneurship, particularly the weaker ambition of women founders as compared to men.
- Sum of mean functions: the influence of this variable is positive. Thus, the more various professional positions the founder has held, the more ambitious he will be. This optimism can be explained by the fact that founders with strong professional experience decide to move from a salaried position, generally with management status, to that of an entrepreneur only if their knowledge of the job or sector enable them to derive a comparative advantage compared to competitors and if the project seems sufficiently significant and profitable for them to be able to hope for future profit greater than that of their former position. This result agrees with the results of Dahlquist, Davidsson and Wiklund (1999) regarding the capacity of experienced entrepreneurs to evaluate an idea very early in the process.
- Presence of a former director on the team: positive. This result strengthens the preceding one on average functions because the motives for their optimism are the same.

The social capital variable has a positive impact on the discounted turnover. This result can be explained by the fact that entrepreneurs who are well positioned in business networks can thus benefit from easier access to suppliers and clients. This explanation was also proposed by Brush (1992) to explain the influence of the gender variable by showing that women entrepreneurs were less engaged in these types of networks. Furthermore, by sharing their project idea with the members of their social network, the entrepreneurs will be supported in their ideas and thus become more ambitious or abandon it.

The significant variables connected to the project characteristics include "Clientele" and "Working capital". For the clientele, seeking a B-to-B market with more significant development perspectives leads to a positive effect on the anticipated turnover. For the working capital, the relation is even more logical and automatic as the working capital generally grows with turnover.

Table 1
Results of the regression on turnover at 3 years

	CA3	Significance	t	Coefficient
Number of founders				
Gender	X	0.047	-2.12	-0.159
Average age				
Level of study				
Nature of education				
Sum of mean functions	X	0.004	2.93	0.402
former director on the team	X	0.035	2.28	0.231
Serial entrepreneur				
GEvsUniv	X	0.023	2.55	0.173
Sector				
IC				
Clientele	X	0.047	2.00	0.190
Working capital	X	0.010	6.06	0.352
R2	0.241			
Anova				
Regression (Sum of 2)	4.032 E8			
Residue (Sum of 2)	3.201 E9			
Sig	0.016			

For the employment, founders and employees (Employ 3), the following two human capital variables, anticipated at three years, are significant:

• Sum of mean functions: positive. This variable has the same influence on three-year employment as on turnover, and the underlying reasons appear to be identical.

• Presence of a serial entrepreneur: positive. This finding confirms the influence of entrepreneurial experience on the conception of the enterprise project.

Note that the variable "gender" is no longer significant. Thus, in terms of projected employment, the difference between men and women disappears. Therefore, they would share the same degree of ambition according to this variable even if the projected turnovers are different.

Conforming to the results of Bosma et al. (2004), we observe that integration in networks has a positive effect on the number of jobs created by the entrepreneur.

Finally, the two variables connected to the project characteristics show almost automatic relations. The variable connected to the sector (code 2) indicates that the more the project is of the "service" type, the less significant is the number of jobs anticipated (compared to activities of industrial production).

Likewise, working capital is a variable connected to the size of the enterprise. In effect, the more working capital one has, the more significant it is. This variable is positively correlated to the size of the enterprise and the number of employees. Moreover, the more the activity consists of commercializing services (in particular, web services in this type of project), the more significant the working capital is in terms of the time required to acquire customers.

Table 2
Results of the regression on employment at three years

	Employ 3	**Significance**	**t-test**	**Coefficient**
Number of founders				
Gender				
Average age				
Level of study				
Nature of education				
Sum of mean functions	X	0.011	2.617	0.31
Former director on the team				
Serial entrepreneur	X	0.024	2.407	0.419
GEvsUniv	X	0.076	1.792	0.16
Sector	X	0.072	-1.82	-0.213
IC				
Clientele				
Working capital	X	0.652	0.453	0.055
R2	0.219			
Anova				
Regression (Sum of 2)	31543			
Residue (Sum of 2)	193342			
Sig	0.018			

The total financing of the project (TotalFint) supports the results obtained regarding the ambition of the project based on the regression of turnover and employment at three years. The variable "Gender" becomes significant with respect to turnover, indicating that women are less ambitious in their demands for financing. On the other hand, the variable "Sum of mean functions" remains significantly positive, as in the two preceding equations.

Likewise, social capital exerts a positive influence on the hope to find financing because it permits possibilities for connecting with investors and bankers.

Among the variables characterizing the nature of the project, the variables related to size are significantly positive, as in the equation for turnover. The variable "Sector," likewise, has a positive coefficient because service-type projects require more

significant investments, particularly in marketing, to acquire a clientele than industrial production-type projects. Finally, the variable "commercial implantation" has a negative effect because in the projects submitted to Entreprendre Paris, the projects requiring commercial implantations are often projects of small scope (e.g., creation of a wine bar); thus, a size effect exists in the opposite direction.

Table 3
Results of the regression on the total anticipated financing

	TotalFint	Significance	t-test	Coefficient
Number of founders				
Gender	X	0.046	-2.016	-0.18
Average age				
Level of studies				
Nature of education				
Sum of mean functions	X	0.074	1.81	0.245
Former director on the team				
Serial entrepreneur				
GEvsUniv	X	0.010	3.871	0.597
Sector	X	0.078	1.783	0.205
IC	X	0.026	-2.27	-0.275
Clientele	X	0.042	2.068	0.229
Working capital	X	0.041	2.114	0.298
R2	0.164			
Anova				
Regression (Sum of 2)	3148574			
Residue (Sum of 2)	1,603 E7			
Sig	0.024			

It is now convenient to consider the empirical results related to the realism of the project.

B.   The Realism of the Project

The realism of a project is a crucial factor for all funding providers. It permits them to reconcile the ambition of the financing structure ("DettesvsTotal") and the capacity to attain financial equilibrium (time to break even).

With regard to human capital, the coefficients of the variables "Number of founders" and "Gender" have the expected negative and positive signs, respectively. The cross-evaluation of the projects and the ability to bring in equity increase with the number of founders, which enables some prudence in the debt rates and makes the project credible. When considering the behavior of women in financing, this study finds that they demand less funding overall than men but are more likely to prioritize debts. Their presence, therefore, negatively affects the realism of the project. These results confirm those of Lasch et al. (2005).

In addition, we observe a positive relation with the variable sum of mean functions. Therefore, it is the second effect proposed in the literature that is dominant: the experience of the founders affects their capacity to borrow.

Regarding social capital, the negative influence of the variable "GEvsUniv" on the proportion of debts in the total financing confirms that inclusion in a social network leads founders to be more prudent in the structure of the financing of their enterprise, in contrast to its influence on the total financing sought.

For the variables depending on the type of project, "Sector," "IC" and "Clientele," we anticipated a negative effect.

For the variable "Sector", the negative effect is due to the fact that projects downstream in the value chain would be less susceptible to debt financing than upstream projects because they have less physical guarantee from the perspective of the bankers (for assets created or acquired). For the variable "Clientele," we deduce from it that B-to-C projects have a lower rate of debt than B-to-B projects, as the latter rely often on the acquisition of physical assets.

For the variable "IC", we thus verify that the more the project anticipates commercial implantations (shops or restaurants), the lower the debt rate.

Finally, for the variable "Working capital", the relationship with the debt rate is almost automatic, as the majority of working capital is financed in the short term in this type of firm by bank credits, and thus, when the working capital increases, so does the debt rate.

Table 4
Results of the regression on the debt ratio

	Dettesvs Total	Significance	t-test	Coefficient
Number of founders	X	0.031	-2.18	-0.195
Gender	X	0.052	1.97	0.201
Average age				
Level of studies				
Nature of education				
Sum of mean functions	X	0.08	2.892	0.576
Former director on the team				
Serial entrepreneur				
GEvsUniv	X	0.045	-2.026	-0.146
Sector	X	0.01	-3.71	-0.319
IC	X	0.007	-2.77	-0.284
Clientele	X	0.092	-1.70	-0.171
Working capital	X	0.101	1.703	0.278
R2	0.178			
Anova				
Regression (Sum of 2)	10747			
Residue (Sum of 2)	49689			
Sig	0.00			

Finally, the realism of the project is approached by means of the time to attain profitability (time to break even called "Breakeven"). We observe that two variables

connected to human capital have a strong positive influence, in contrast to social capital, which has no influence. These variables are "Level of studies" and "Sum of mean functions." The underlying explanation is similar for both variables; the education and experience of founders cause them to be more realistic about the time required to achieve profitability. Social capital does not appear to have an influence on the breakeven point as this depends more on the intrinsic characteristics of the project, its economic model and the ability of the directors to implement it.

Among the project type variables, the variable "Sector" displays a negative sign, confirming that projects based on services have a shorter anticipated time to return on investment. The three other factors connected to the project appear to have an impact on lengthening the breakeven point. For the variable "IC," we claim that the more commercial implantations the project will have, the more time this step will take, increasing the time to break even. For the variable "Clientele" (B-to-B or B-to-C), the positive sign is due to the more significant delays in acquiring a customer base in B-to-C projects. Finally, for working capital, the growth of short-term financing makes it more difficult to reach the profitability. The last two effects are often combined for projects of the type "web services," where young enterprises file for bankruptcy because they have not yet managed to extract a positive result and can no longer finance their investments as well as their operating cycle.

Table 5
Results of the regression on the time to break even

	Breakeven	Significance	t-test	Coefficient
Number of founders				
Gender				
Average age				
Level of studies	X	0.194	1.307	0.118
Nature of education				
Sum of mean functions	X	0.193	1.307	0.117
Former director on the team				
Serial entrepreneur				
GEvsUniv				
Sector	X	0.016	-2.44	-0.209
IC	X	0.028	2.231	0.233
Clientele	X	0.001	3.259	0.28
Working capital	X	0.05	2.878	0.33
R2	0.141			
Anova				
Regression (Sum of 2)	15.354			
Residue (Sum of 2)	93.346			
Sig	0.00			

From a purely statistical perspective, the five tables above indicate that despite the sometimes small R^2 coefficients, the degree of significance of the Anova is below

5%, which validates the quality of these five models. Furthermore, the small variance inflation factors (VIF < 2.6) associated with the small standard deviations of the estimated parameters demonstrate the absence of collinearity problems.

VI.   CONCLUSION

In conclusion, it is helpful to recall that the interest of the present study is due largely to its originality in so far as works considering this very early stage of the entrepreneurial adventure is rare. The application of the theory of organizational capital has enabled us to evaluate the influence of human and social capital on the conception of the enterprise project from its genesis through the financial projections made by the founders at the stage of the business plan. Two primary variables were the object of the study: the degree of ambition of the projects and their degree of realism. Based on tests of the hypotheses conducted on an original sample of 125 business plans of enterprises at the creation stage, the results show the influence of human and social capital on the conception of enterprise projects. In particular, the significance of the positions held prior to founding the current enterprise, the presence of a former director (or a serial entrepreneur) on the team of founders and the strength of the social network of the entrepreneurs have a positive influence on the degree of ambition of the project. The proportion of women on the team plays an inverse role. Moreover, the size of the team of entrepreneurs and the strength of their social network is positively correlated to the realism of the project, in contrast to the average level of positions held previously by the founders, the average length of their studies and the proportion of women on the team.

ENDNOTES

1. Source : APCE (Agence Pour la Création d'Entreprise – French Agency for the Creation of Enterprise).
2. Interviews conducted with venture capitalists and entrepreneurs in the framework of events organized by Marc-Tech (2000-2008). The authors also regularly participate in round tables for financing and start-ups as consultants of venture capitalists.
3. http://www.opesc.org/analyses/reseaux-gen.php

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