Journal of Economics, Finance and Management Studies

ISSN (print): 2644-0490, ISSN (online): 2644-0504

Volume 5 Issue 03 March 2022

Article DOI: 10.47191/jefms/v5-i3-21, Impact Factor: 6.228

Page No. 687-699

The Financial Performance of Companies Financed by Venture Capital

Faiza ELLOUMI

Doctor in Management Sciences Faculty of Economics and Management of Sfax University of Sfax TUNISIA

ABSTRACT: One of the research questions while waiting for a solution is to know the impact of venture capital on the performance of companies. In the case of a significant effect on added value and on the performance of companies, venture capital is said to be a very relevant mode of financing. In this regard we test whether there is a financial added value realized by the capital companies within innovative companies and we examine different determinants favoring financial performance. Mainly, we study whether the participation of venture capital leads to a significant increase in the performance of the company.

KEYWORDS : venture capital - innovative companies - financial performance

1. INTRODUCTION

It is widely accepted that venture capital plays an important role in the economic growth of innovative firms. Venture capital is generally viewed by academics and practitioners as the most appropriate form of financing for businesses. Venture capital firms provide value-added services (Sorensen, 2007), such as coaching, mentoring and access to investment banks, which could have effects on financial performance. In addition, the companies financed by these companies benefit from a financial profitability which can be provided by the notoriety of the venture capital companies, (Hsu, 2006 and Lindsey, 2008).

The diverse past studies have estimated the infulence of stable and upward-oriented venture capital funding on the performance of business. Particularly, a few studies have focused on the various contributions to business evolution, such as sales and job growth (Alemany and Marti, 2005; B. Bottazzi et al, 2008). Regarding productivity, Alemany and Marti (2006) focus on the effect of risk capital on the opportunities for fractional output (e.g. capital productivity and workforce productivity), while Chemmanuur, (2011) and Colomb, (2012) have shown a favorable effect of this financing on the aspect of productivity despite what was pointed out by Gompers and Lerner (2001). In fact, the best performance to be found in companies is linked to the existance of venture capital in the company's funds, but it could also be demonstrated by the attraction of companies with better business opportunities. To clarify, companies financed by venture capital could be more profitable than those not financed by venture capital. If it is the case, the ability of selecting firms with strategic and financial characteristics could explain the major performance of venture capital funded companies. In addition, venture capital companies help improve business performance through added value on activities.

2. THE HYPOTHESES OF THE STUDY

Venture capital markets play a key role in financing innovation. Indeed, venture capital firms are investors who specialize in the finance of new ingenious companies which are at the cutting edge of technology and which have a risky profile. These companies are driving strong growth and creating jobs at a remarkable rate. We will study the financing needs of innovative companies and if it presents an essential element for the performance of innovative companies, then we will analyze their implications in terms of financial constraints. It is about a model which makes it possible to see the various financial aspects relating to the financing need and its constraints. It is, therefore, necessary to test the relationship between venture capital and innovative companies; in fact, one is supposed to study first the aptitude of the company to innovate and its impact on the financial performance. We highlight the role of venture capital expertise in the financing of innovative projects and the proper functioning of innovative companies.

The companies selected by venture capital companies thus have a number of specificities. This choice requires a very particular aspect; companies must operate in innovative activities. We are talking about innovative companies seeking rapid growth favoring the development of enterprises and the achievement of previous objectives.

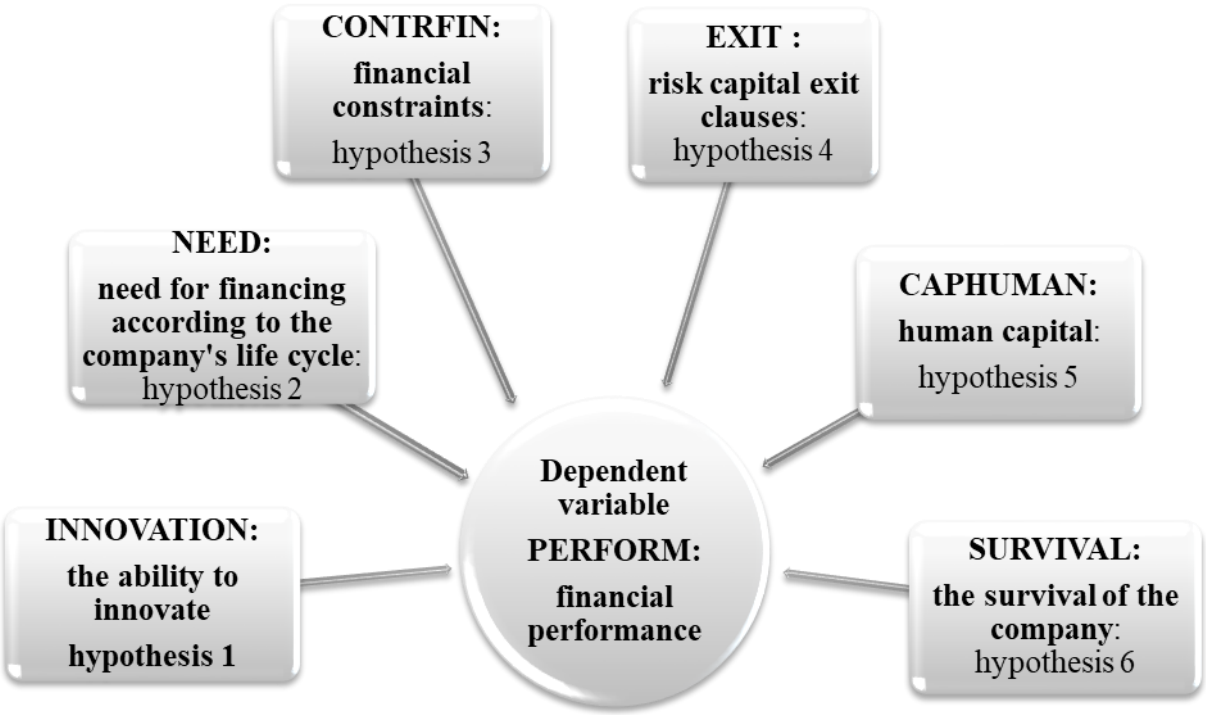

Figure 1: diagram representative of the hypothesis.

2.1. Innovation:

The multitude of innovation possibilities encourages venture capital firms to exploit these opportunities because venture capitalists have a very important contribution in terms of financial and managerial assistance. According to the industry organization literature, companies are more seemingly innovative than startups since the scale of possible innovation is large. Thus, the importance of innovation is related to funding at a favourable stage (Reinganum, 1983; Gans and Stern, 2000). Venture capital firms usually specialize in a small group of firms and, therefore, may have an advantage in valuing firms strictly (Land and Pyle, 1977). The function of venture capital companies in innovating and reaching development is supported by other proofs. As stated by the National Venture Capital Association (1998) and Hellmann and Puri (2000), VC-backed companies can get their products to market faster than other non-VC-backed compagnies, which suggested that investors can assist innovative corporations in finding opportunities and distributing channels.

According to Masayuki Hirukawa and Masako Ueda (2011), companies experience high sales growth as investors change the planning of their business wallet to take advantage of innovation. These authors find that innovation affects the performance of companies financed by venture capital. In particular, the evolution of lagged innovation is positively linked with venture capital financing.

The main objective is to see if innovation is a determining factor in the performance of innovative companies financed by venture capital. So we derive these theories:

Hypothesis 1: Innovation and the financial performance of companies that are financed by venture capital are linked by a positive relationship.

2.2. Financial constraints:

Czarnitzki (2006) studied the role of financial constraints in the performance of the innovative activity of German companies. His sample is composed of innovative companies. It uses a financial integrity index estimate of companies to measure their lack of access to external financing in the presence of financial constraints.

Czarnitzki (2006) is specifically interested in the constraints of financing innovation and measures the difficulties of access to external financing from a rate provided by a specialized agency. These rates are evaluations measuring the financial profitability of companies based on information relating to different levels. Venture capital firms, which rely on this synthetic information, provide financing at a reduced cost to companies with financial performance. He also discussed the role of financial constraints on the innovation spending of German companies. He introduced an indicator of financial reliability of companies to measure financing obstacles in relation to financial constraints that positively influence financial performance.

Hypothesis 2: the impact of financial constraints on the level of financial performance is positive.

2.3. **Financing need according to the company's life cycle:**

The venture capital financing mechanism is likely to reduce the agency problem between venture capital firms and entrepreneurs and, by its flexibility, it takes into account the financing needs of the company depending on its stage of development. development; This new method of financing is supported by support or a partnership (Etoundi, 2003).

Contemporary studies have taken into consideration the problem linked to the need for financing, depending on the company's life cycle, as a fundamental determinant for the performance of innovative companies in Belgium. Among these studies, research that established the importance of the need for financing in the start-up and growth phase (Pirnay, Surlemont and Degroof, 2006). Problems of financing by venture capital funds are mentioned in particular, both for "seed capital" (seed / start-up) and "early stage" (development). According to the literature we note that the life cycle of the company influences the performance of innovative companies financed by venture capital. This assumption is made with the aim of predicting a certain direction in the context of the relationship between venture capital and the innovative firm. Casamatta (2003),) has shown that performance is positively correlated with the need for financing, and mainly the stage of development. So the investment conditions introduce the volume of investment and the stage of development (Black and Gilson, 1998). Then, we go a little further in the analysis of the characteristics of the added value provided by venture capital companies. In fact, the consistency of the impact of venture capital on company's performance may be different especially in the early years following the entry of venture capital firms. Assuming that the admittance of a venture capitalist includes some sort of business renaissance, the most significant effect is expected to be in the first two years of venture capital funding (Bertoni et al, 2011). For his part, Sapienza and Gupta (1994) concluded that the phase of evolution of the company is one of the direct sources of risk. Venture capital firms are able to provide a business with particular growth during its early stages of development. Typically, venture capital funding is largely intended for the development and growth stages (Gabrielsson and Huse, 2002). According to Amit et al (1997) This contribution is low in the priming and starting stages. Nomo (2008) concluded that there is an evolution of the financing rate of the development phase which translates a positive impact on financial performance. In addition, traditionally in Canada, venture capital has is more oriented towards the stages of development or growth of the portfolio companies such as towards the start-up or start-up stages (Amit et al, 1997). Nomo (2008) reports that between 2001 and 2004, the average rate of venture capital invested in later stages of business development in Canada was 44%, rising to 47% in 2005 and 57% in 2006.

Hypothesis 3: the need for financing according to the life cycle has a positive impact on the financial performance of companies financed by venture capital.

2.4. Human capital:

Investors find it quite complicated to locate the dangers and findings of innovative companies that lack experience and to look for developing ingenious technologies (Carpenter and Petersen, 2002a). Therefore, a negative effect related to the selection problem appears, as investors are not able to separate innovative companies with high quality projects. It is, also, quite difficult for investors to keep an eye on the behaviour of innovative entrepreneurs. In these conditions, there is an ethical hazard issue. Thus, obtaining an extrinsic financing can lead to entrepreneurs proceeding in an opportunistic manner.

The adverse selection mentioned above and the problems of (Berger and Udell, 1998). Sadly, the ostly of assets of innovative companies are intangible and / or specific to the company, of so that they have little of guarantees to offer. Consequently, innovative companies will struggle to secure a suitable foreign financing and most of them have to depend exclusively on personal funds (Berger and Udell, 1998).In turn, these constraining financial situations block innovative companies with high growth scope from seeking another adequate means of financing (Carpenter and Petersen, 2002 b). Venture capitalists are not as much exposed as other investors to the adverse selection of risk issues. Therefore, they are able to choose innovative companies with great possibilities and supply them with the financing and value-added services that are necessary to achieve the desired profitability (Gompers and Lerner, 2001, Denis, 2004). In conclusion, businesses backed by venture capital firms are growing faster than others. These companies, founded by people with eligible skills, have greater capacities than other companies. Unfortunately, the possibility linked with these capacities might stay untapped, or partly exploited, due to the deficiency of funding. To the scope that venture capitalists are able to recognize these potential, innovative companies with team spirit made of qualified experts, will attract venture capital investment than any other companies (Gompers and Lerner, 2001; Denis, 2004). Venture capital firms are early stage investors who may have more capacity than other investors and therefore they are able to choose companies having a well-structured human resources function. These investors can provide their expertise to companies with extra skills and human resources mainly performing a support function. Human capital is characterized by high skilled and competent people (the most educated at academic level in economics, management and

experienced in the same sector) which will affect financial performance. Thus, the growth of companies financed by venture capital is directly affected by the impact of the human capital. However, we suppose the following hypothesis:
*Hypothesis 4***:** The growth of innovative companies is indirectly affected by the human capital of founders, adjusted by venture capital investments.

2.5. The exit of venture capital companies:

Bamford et al. (1999) suggested that the first decisions and conditions of the evolution of the future of the company are favored by the venture capital firms. In early phases, entrepreneurs consider an initial planning relying on the resources they already have and those they have acquired (Döllinger, 1995). The participation of venture capital implies a kind of "rebirth", the resources supplied by venture capital participate in the existing set of resources and encourage entrepreneurs define a fresh strategic behavior oriented towards a positive effect even in the event of its absence. Therefore, it is expected that the footprint exerted by venture capital firms, during the holding period, will continue to operate and be of benefit to the funded business even after the venture capital firm exits. The fundamental argument is that the capacities of these investors indelibly influence the company and all kinds of operations. However, the way and method of organizing things become routine that will continue to be active and effective even after they eventually leave. In particular, we assume that once the effect of the participation of venture capital firms (which shifts the productivity of the firm to higher levels than those preceding the entry of venture capital) is absorbed, the corporate profitability does not decrease (i.g productivity growth). The presence of venture capital is also probable to affect the probability that companies are acquired, because commercial sales are by far the most common medium for venture capital firms (Bottazzi et al. 2004). So, if there is a relationship between financial profitability and output and, in turn, output will be significantly correlated with productivity growth. In contrast, we find that this financing immediately increases business sales and employment. On the other hand, it is undeniable that this investment immediately boosts the sales and employment of companies. The development rate indicates the importance of the injection of venture capital for these companies to perform their planning. These results show the various effects concerning the sustainability of the evolution for companies supplied by venture capital.

Hypothesis 5. The exit of venture capital companies has a positive impact on the performance of the company.

2.6. **The survival of the company:**

Most previous studies show that companies funded by venture capital grow faster, they have a strategy that promotes long-term financial performance. The existing innovation spirit literature has shown that productivity evolution is an appropriate execution rate for innovative companies that specialize in high-tech industries. Furthermore, it is interesting to note that we strongly adhere to the idea of Chemmanur et al, (2011) by modeling a selection process based on the economic performance of firms (i.e. improvement operating efficiency, measured by productivity growth). However, we believe that venture capital firms can select companies based on their “performance potential” and not on past performance (Clarysse et al, 2011). As suggested by Bamfordet al (1999) and Boeker (1989), the first decisions and conditions of financing have a lasting influence on the future of the evolution of the company. In the early stages, entrepreneurs adopt ainitial strategy based on the funds they already have and those they have reasonably acquired (Dollinger, 1995). Since the participation of venture capital, we involve a kind of "renaissance cabinet", the resources provided by the venture capital firms contribute to all existing resources and support entrepreneurs define a new strategic behaviour based on long-term impacts. Therefore, it is expected that the influence exerted by venture capital firms during the holding period will continue to work and be beneficial to the business. The primary argument is that venture capital possibilities habitually influence the organization and all kinds of operations.
Hypothesis 6. The survival of the company positively influences the performance of innovative companies financed by venture capital.

2.7. ***The dependent variable "financial performance":***

Referring to the dimensionality tests, we analyze the productivities of labor and capital, and the level of sales as measures of the performance of companies financed by venture capital. These residual growth measures were completed by Van Biesebroeck, (2007). The increase in sales is seen as a signal of the reliability of the company's activity. Puri and Zarutskie (2010) prove that companies financed by venture capital have a higher level of sales than those not financed by venture capital. Accordingly, this factor is composed of: labor productivity, capital productivity and the level of sales.

3. RESEARCH METHODOLOGY

3.1. Breakdown of companies by business sector:

Percentage of participation of venture capital companies by business sector:

Sector	***Percentage of participation***
Telecommunications	***65%***
Suppliers of technological equipment	***55%***
Software	***45%***
Biotechnology	***60%***
Construction	***30%***
Oil	***40%***
Communication	***60%***
Materials	***25%***
personal products	***15%***
Health services	***25%***
Energy	***56%***
Equipment	**20%**

These results are consistent with those of Jean-Sébastien Lantz, Jean-Michel Sahut and Frédéric Teulon (2011), in fact we demonstrate the evolution of investments in the industrial sector. In Tunisia, the first sectors taken into consideration by the venture capital companies that have benefited from most of this investment are activities relating to software and telecommunications, the biotechnology and medical device sectors have become two predominant targets of venture capital investment. A significant increase in the technology and energy sector reflects the concern of venture capital investors in innovative activities.

3.2. Research model:

In order to better specify our model, the questionnaire for this study is made up of closed questions. To simplify the work of the respondents, open questions were avoided. However, there is a small number of control questions, which allow the consistency and credibility of the answers to be checked. The questionnaire is split into four sections:

The first section aims to enter the general information of the company (age of the company, sector of activity and percentage of capital held by venture capital companies). The second part contains the determinants of a strategic nature. So we have the company's ability to innovate, the most likely scenario for the future of the company, the relevance of the company's human funds in the presence of risk capital and the degree of satisfaction with the exit clauses venture capital. The third part deals with the financing of the company. The questions asked correspond to the business financing need and business financial problems. The last part is devoted to the contribution of venture capital to profitability.

Consequently, we have a model that reflects the relationship between strategic and financial factors on the one hand and the financial performance of companies financed by venture capital on the other. The six hypotheses are fed into an equation which then allows us to perform the hypothesis tests based on linear regression:

PERFORM = constant + β1INNOVATION + β2CAPHUMAIN + β3SURVIE + β4SORTIE + β5CONTRFIN + β6BSFIN

Control variables:

We integrate control variables, first, we have the age of the company introduced to allow us to control for the cross-sectional differences between companies, respectively, according to age. Second, we will include the size of the firms as a control variable. In our model of the relationship between venture capital financing and firm performance, the effect of firm size is typically used in this type of analysis (e.g. Grilli and Murtinu, 2012). Nonetheless, we proceed to check whether the "company size effects" affect our results.

The final variables of the model.

Independent variables			
Variable	**Item**		**Definition**
INNOVATION: the ability to innovate	**INNOV1**	New products	
	INNOV2	Improvement of procedures or production processes	
CONTRFIN : financial constraints	**PROBFIN1**	Risky activity	
	PROBFIN2	Debt ratio	
NEED: need for financing according to the company's life cycle	**BSFIN1**	Pre-start	
	BSFIN2	Start-up	
	BSFIN3	Growth	
CAPHUMAN : human capital	**CAPHUMAN1**	Level of education	
	CAPHUMAN2	Professional experience	
SURVIVAL: the survival of the company	**SURVIVAL1**	Funding potential	
	SURVIVAL2	Long-term risk taking	
	SURVIVAL3	Development strategy	
EXIT : risk capital exit clauses	**EXIT1**	Preemption or approval clause	
	OUTPUT2	Exit clause agreed	
Size of the company	**LOGTA**	It is the natural logarithm of total savings.	
Activity area	**SECT**	Binary variable which takes 1 if the company belongs to a high-tech sector, 0 in the opposite case	
The dependent variable			
Dependent variable PERFORM: financial performance	**PERFORM1**	Labor productivity	
	PERFORM2	Capital productivity	
	PERFORM3	Sales level	

4. METHOD OF ANALYSIS

The hypothesis test on our general model is carried out by linear regression. The objective of this analysis is generally to specify the relationship between all the variables. Regression was used to study the main effects and the interaction of the independent variables. The usual indicator is the Fisher or Student test with also the degree of freedom and level of significance, the Beta coefficient associated with each independent variable represents the percentage of participation of this criterion in the model, if it is negative, the dependent variable is not explained linearly by the independent variable.

5. THE MAIN EMPIRICAL RESULTS AND INTERPRETATIONS

The value of F is 71.283and therefore it is significant at p <0.0005. So this explains why the probability of having an F value of this dimension by chance is less than 0.05%. There is, therefore, a statistically considerable linkage between the dependent variable and the independent variables. We therefore conclude that the model presented by the independent variables approves a better prediction of the dependent variable.

ANOVA 1

ANOVAa						
Model		Sum of squares	Dof	Average of squares	D	Sig.
1	Regression	72.779	4	18.195	71.283	, 000a
	Residue	29.353	115	, 255		
	Total	102,132	119			
at. Dependent variable: financial performance						
b. Predicted values: (constants), EXIT, NEED, SURVIVAL, INNOVATION, SECT, CAPHUMAIN, LOGA, CONTFIN						

please note: the absence of significance (i.e. p associated with the Fisher value is not significant), does not allow the model to be interpreted.

6. MODEL SUMMARY

In our model, the multiple correlation coefficient is equal to 0.84. This coefficient informs us about the fit of the data to the model. Referring to the square of the correlation coefficient, we have a value of R2 equal to 0.71. This specifies the proportion of the variability of the endogenous variable (y) explained by the regression model. We can therefore say that the involvement of venture capital firms can explain nearly 70% of the variation in the independent variables.

Model 1 summary

Model summary				
Model	R	R-two	R-two adjusted	Standard error of estimate
1	, 844a	, 713	, 703	, 50521798
at. Predicted values: (constants), EXIT, BSFIN, SURVIE, INNOVATION, SECT, CAPHUMAIN, LOGA, CONTFIN				

The following table is fundamental, because it is able to specify the explanatory variables which have a significant influence on the model. The variables which have a positive effect are the determinants which allow the global model to offer a significant added value in the understanding of the variability of the variable to be explained. The standardized coefficients are likely to see the direction of the relationship between each independent variable and the dependent variable (positive or negative effect). The hypothesis tests performed on the LOGA and SECT control variables are not significant.

Multiple linear regression. 1

Model		**Beta**	**T**	**Sig**
1	(Constant)		3,615	, 000
	LOGA	, 026	, 292	, 771
	SECT	, 179	2,024	, 045
	CONTFIN	-, 143	-1.099	, 274
	BSFIN	, 271	3,746	, 000
	INNOVATION	, 239	3,299	, 001
	CAPHUMAN	, 324	3.816	, 000
	SURVIVAL	, 298	3.507	, 001
	EXIT	, 210	4.124	, 000

Dependent variable : PERFORM

Statistical analysis allows us to identify some significant links:

7. RELATIONSHIP BETWEEN STRATEGIC VARIABLES AND THE FINANCIAL PERFORMANCE OF COMPANIES FINANCED BY VENTURE CAPITAL

8. ABILITY TO INNOVATE

The objective of hypothesis (**H1**) is to test the effect of innovation on the financial achievement of innovative companies financed by venture capital. According to the verification of statistical test results, this factor positively influences financial performance. However, the coefficient relating to the contribution of this indicator is greater than zero (0,**239**). Test of3,299and the significance level is 0.001 so the hypothesis **H1** is accepted**.** This hypothesis predicts that the ability to innovate positively influences financial performance. The items of the INNOVATION variable used are: new products and / or services and improvement of procedures or manufacturing processes.

According to the literature on the organization of industry, companies financed by venture capital are likely to grow when the scale of possible innovation is immense. Reinganum (1983) and Gans and Stern (2000) emphasize the importance of innovation and find a positive relationship between innovation and the performance of funding a favorable stage through venture capital. The role of venture capitalists in innovating and achieving growth is supported by another proof. Hellmann and Puri (2000) predict that firms financed by venture capital are likely to sell their products to the market more easily and in a shorter period, since innovations stimulate venture capital firms to participate in the financing of these companies. Masayuki Hirukawa and Masako Ueda (2011) find a positive relationship between innovation and the financial performance of companies financed by venture capital, they therefore find that these companies experience high sales growth as investors change their portfolio strategy to take advantage of innovation. According to these authors, the growth of lagged innovation is positively linked with financial performance.

9. THE SURVIVAL OF THE COMPANY

Hypothesis (**H2**) presents the influence of firm survival on the financial performance of innovative firms financed by venture capital. According to the regression applied on this hypothesis test, the variable "SURVIVAL" positively influences financial profitability. However, the coefficient associated with the contribution of this indicator exceeds zero (0**, 298**). Test of **3.507**and the significance level is 0**, 001**. Hypothesis **H2** is confirmed**.** This assumption predicts that the survival of the company has a positive impact on performance. The criteria for this factor are characterized by a risk-taking development strategy with a well-defined long-term financing potential. In addition, we are convinced from the results of Chemmanur et al, (2011) that the choice of companies is based on performance future economic (improvement in operating efficiency, measured by productivity growth). In addition, venture capital firms select companies based on their "performance potential" and not on past performance (Clarysse et al, 2011). Our results coincide with those of Bamford et al. (1999) and Boeker (1989), who find that the future and development of the venture capital firm has an effect on its financial performance. Venture capital helps improve corporate resources and support business leaders to define new strategic behavior based on effects that have continuity in the future. This implies that this effect exerted by venture capital firms during the holding period does not cease to function and be beneficial for the company. Consequently, the survival rate of the firm could positively influence the financial performance of companies, through its potential for venture capital financing, because these companies benefit from a greater donation of both financial and non-financial funds as confirmed by (Puri and Zarutskie, 2011).

10. THE EXIT OF VENTURE CAPITAL

This hypothesis has just tested the influence of the exit of venture capital on the profitability of innovative firms. However, according to the regression applied on the conceptual model, hypothesis **(H3**) is confirmed. The independent variable relating to the exit of venture capital has a coefficient linked to the contribution of this indicator in the model, equal to 0**, 210**. Student's test is **4.124** and the significance level is 0**, 000.**

Throughout the holding period, the footprint exerted by the venture capital firms will keep on functioning and being profitable for the funded company, even after the venture capital firm exits. The authors assume that the capabilities of these investors perpetually affect the company and all kinds of long-term operations. The methods learned become routines that will continue to be active and effective even after their definitive dismissal (Packalen, 2007). Venture capital financing is a factor enabling business acquisition (Bottazzi et al. 2004). As a result, output will be significantly correlated with financial performance. The growth rate indicates that The entrepreneurs of the company can impose an exit clause in order to limit the entry of an unwanted shareholder or else so that none of the parts of the group of shareholders can sell shares to a third party without the latter. was explicitly part of this alliance. This is always in favor of the company and its financial performance.

11. HUMAN CAPITAL AND ITS IMPACT ON FINANCIAL PERFORMANCE:

Hypothesis (**H4**) has just tested the link between human capital and the financial performance of companies financed by venture capital. The regression results performed on this model, demonstrate a positive influence of human capital on the endogenous variable "financial performance". The beta coefficient of this indicator is greater than zero (0,**324**). The Student's Test is **3.816** and the significance level is 0**, 000**. The hypothesis relating to the CAPHUMAN variable is confirmed.

The econometric results relating to the human capital of the founders support the assertion of the skills-based potential that the most qualified people (according to our estimates the most educated at university level in economics, management and with more than technical work experience in the same sector as the innovative company) ensure better performance for the companies financed. So the hypothesis **H4** is accepted. According to financial literature, human capital has a constructive effect on the evolution of the venture capital-financed firm. This argument holds for the experience of the founders and their academic level. Unsurprisingly, the previous results suggest that some of the characteristics of human knowledge have a positive impact on firm performance. Venture capital investments are attracted by the experience of human capital. Estimates from a regression model demonstrate that the human capital directly associated with the assistance of venture capital firms will have explanatory power (Hellmann and Puri, 2002). Most of companies have confirmed that due to the certification effect of being funded by venture capital, it has become much easier for them to access external resources and professional capacity, including through the creation of business alliances. Previous studies (Baum and Silverman, 2004) have confirmed this hypothesis. This research has highlighted different reasons why access to venture capital finance promotes the growth of innovative companies with human capital with specific characteristics. So we are talking from a perspective based on the skills and the most competent people (university level in the fields of economics, management and having technical work experience in the same sector),

12. FINANCIAL VARIABLES

13. FINANCIAL CONTRAINTS

Hypothesis (**H5**) tests the effect of financial limitations on the performance of innovative companies financed by venture capital. When analyzing the results of regression tests, this factor negatively influences financial profitability. We have a coefficient which is less than zero (**-0.143**). «Test of**-1.099**and the significance level is 0**, 274**therefore hypothesis **H5** is rejected**.** Financial constraints have a negative effect on financial performance.

Hypothesis (**H5**) anticipates that fiscal restrictions based on the debt ratio and risky activity present criteria preventing financial performance. The financial constraints specified by the variable “CONTFIN” have a negative effect on financial profitability, hence the H5 hypothesis is rejected.

Our result runs counter to the Czarnitzki study (2006) which investigated the role of financial constraints on innovation spending and the performance of German firms. In accordance with the results of his study on a sample of innovative companies, he introduced a criterion that defines the financial profitability of companies to measure financing obstacles, finally, he noted the existence of financial constraints that positively influence financial performance. He has proven that venture capital firms rely on this synthetic information and provide financing for profitable businesses at a reduced cost.

14. THE NEED FOR FINANCING

The need for financing according to the life cycle of the company has a positive impact on the financial performance of companies financed by venture capital, thereafter the hypothesis (**H6**) is accepted. However, the coefficient relating to the contribution of this indicator is greater than zero (0**, 271**). Test of **3,746** and the significance level is 0**, 000**. Hypothesis (**H6**) is confirmed. This factor is specified by 3 phases: pre-start, start-up and growth. The younger company assimilates a good involvement of venture capital firms. During the early stages of the life cycle, the business doing business with venture capitalists achieves its desired profitability. In other words, the financed company must not go beyond the growth phase.

Pirnay, Surlemont and Degroof (2006) deal with the effectiveness of financing needs in the start-up and growth phase. According to these authors, the business life cycle influences the performance of innovative companies financed by venture capital. Casamatta, Cornély and Yosha (2002) have shown that performance is positively correlated with the need for financing, and mainly the stage of development. During the early years of the business life cycle, venture capital firms approve an increase in the performance thanks to value-added services. Bertoni et al. (2011) demonstrate that it is a significant effect of this variable during the first two years of venture capital financing. Our result goes against that of Sapienza and Gupta (1994) who concluded that the stage of development of the company is one of the direct sources of risk. Generally speaking, venture capital financing

is largely intended for the development and growth stages. Nomo (2008) deduced that the need for financing during the growth phase has a positive impact on the financial performance of the company financed by venture capital. Frequently, venture capital is devoted mainly to the stages of development or growth of portfolio companies (Amit et al, 1997). Consequently, the hypothesis dealing with the influence of the variable "BSFIN" on financial performance is justified.

CONCLUSION

Access to venture capital finance is seen as an additional financial resource for companies when financial constraints are inadequate. During the early years of the business life cycle, venture capital firms approve an increase in the performance thanks to value-added services. Generally speaking, venture capital financing is largely intended for the development and growth stages.

These results greatly expand the comprehension of the impacts of human capital and venture capital exploitation on the evolution of innovative firms. There is approval in the existing entrepreneurship literature that these agents are two fundamental drivers of evolution. It is believed that a complete and precise presentation of the partnership process of investors of innovative companies and venture capital would be an important step to build a better theory of the performance of innovative companies. In modelling this partnership process, we must consider that its results are subordinate to diverse impacts. More theoretical work will be necessary to earn a better understanding of the determinants of the non-financial performance of innovative firms.

Existing empirical studies have shown great know-how to address the challenges of establishing and quantifying a causal relationship between venture capital and innovation. For example, this model proposes that the connection between venture capital financing and the profitability of innovation might rely on the prospect for extracting surpluses from innovative firms and therefore on the characteristics and structure of the industry. It would be interesting to explore it experimentally in future work.

The effect exerted by venture capital firms during the holding period does not cease to work and be beneficial to the business. Consequently, the firm's survival rate could positively influence the financial performance of companies through its potential for venture capital financing.

The study of venture capital could be extended in other research perspectives. The distribution of control rights has been considered fundamental for exit decisions (Dessí, 2005) and the design of optimal contracts for innovative entrepreneurs in the existance of exit decisions as well as their potential. The entry of competing companies deserves to be deepened. In general, much remains to be done to study the relationship between venture capitalists (e.g. control rights, staging, syndication) and innovative firms.

BIBLIOGRAPHY

1) AIFI (2011), AIFI, Francophone international association of stakeholders, Scientific review of AIFI. International meeting.
2) Alemany, L., Martí, J. (2005) “Unbiased Estimation of Economic Impact of Venture Capital Backed Firms”, EFA 2005 Moscow Meetings Paper.
3) Amit, R., Brandler, J. and Zott, C. (1997). Financing entrepreneurship in Canada.
4) Aouni, Z. and Surlemont, B. (2007). The process of acquiring entrepreneurial skills: a cognitive approach. Proceedings of the Congress of the Academy of Entrepreneurship, Sherbrooke.
5) Bottazzi L., Da Rin M. and Hellmann T. (2008), “Who Are the Active Investors? Evidence from Venture Capital”, Journal of Financial Economics, vol. 89, n ° 3, p. 488-512.
6) Bamford D, King S & Sarre R (1999). Factors Affecting Remand in Custody: A Study of Bail Practices in Victoria South Australia and Western Australia Research and Public Policy Series no 23 Canberra Australian Institute of Criminology.
7) Baum, JA, Silverman, BS, (2004). Picking winners or building them? Alliance, intellectual, and human capital as selection criteria in venture financing and performance of biotechnology startups.Journal of Business Venturing, 2004, vol. 19, issue 3.
8) Bertoni et al, (2011). Venture capital financing and the growth of high-tech start-ups: Disentangling treatment from selection effects, Department of Management, Economics and Industrial Engineering, Politecnico di Milano, Piazza Leonardo da Vinci, 32, 20133 Milan, Italy.
9) Bernard Blackand Ronald J. Gilson, (1998). Venture capital and the structure of capital markets: banks versus stock markets, Journal of Financial Economics, 1998, vol. 47, issue 3, 243-277.
10) Warren Boeker, (1989). Strategic change: the effects of foundation and history. Journal of the Academy of Management, Vol. 32, n ° 3 (September 1989), pp. 489-515.

11) Bottazzi L. and Da Rin M. (2004), "Venture Capital in Europe and the Financing of Innovative Companies", Economic Policy, n ° 34.
12) Carpenter, R.and Petersen, B. (2002a). Capital market imperfections, high-tech investments and new equity financing. The Economic Journal, 112 (1): 54 - 72
13) Carpenter, R.and Petersen, B. (2002b). Is Small Business Growth Limited by Domestic Financing? The Review of Economics and Statistics, 84 (2): 298 - 309.
14) Catherine casamatta, (2003). Financing and advice: optimal financial contracts with venture capital investors.The Journal of Finance, 58 (5): 2059-2086
15) Chemmanur, TJ, Krishnan, K., Nandy, D., (2011).How the venture capital financing improves efficiency in private companies?A look below the surface. Rev. Financ.Stud.24.
16) Clarysse, B., Tartari, V., Salter, A., (2011). The impact of entrepreneurial capacity, experience and organizational support on academic entrepreneurship. Research Policy 40, 1084-1093.
17) Dirk Czarnitzki, (2006). Research and development in small and medium-sized enterprises: the role of financial constraints and public funding. Scottish Journal of Political Economy, 53 (3): 335-357.
18) Roberta Dessi, (2005). Start-up financing, monitoring and collusion.RAND Journal of Economics, flight. 36, number 2, 255-274.
19) David J. Denis, (2004). Entrepreneurial Finance: An Overview of the Problems and Evidence.Journal of Corporate Finance, flight. 10, number 2, 301-326.
20) David H. Hsu & Martin Kenney (2004), "Organizing Venture Capital: The Rise and Demise of American Research & Development Corporation, 1946–1973", Working Paper, 2004.
21) Dollinger, MJ (1995). Entrepreneurship: strategies and resources. Boston: Irwin. Includes bibliographical references and index. ISBN 978-0-9713130-6-4 1. New business enterprises. 2. Entrepreneurship.
22) Gans, JS and S. Stern (2000) 'Incumbency and R&D Incentives: Licensing the Gale of Creative Destruction', Journal of Economics & Management Strategy 9.
23) Gompers P. & Lerner J. (2001). The Venture Capital Revolution, Journal of Economic Perspectives, 15: 2.
24) Grilli and Murtinu, (2012). Government, venture capital and the growth of European high-tech start-ups: an analysis of panel data at the firm level.SSRN electronic journal.
25) Hellmann, T. and Puri, M. (2000), "The Interaction Between Product Markets and Funding Strategy: The Role of Venture Capital", The Review of Financial Studies, Vol. 13, no.4.
26) Hellmann, T., Puri, M. (2002) "Venture Capital and the Professionalization of Startup Firms: Empirical Evidence", Journal of Finance, 57 (1).
27) Hsu, DH, (2006). Thecapital -venture capitalists and cooperative start-up marketing strategy. Manag.Sci.52.
28) Jonas Gabrielsson and Morten Huse, (2002). The venture capitalist and the board of directors in SMEs: roles and processes.Capital risk, 4 (2): 125-146.
29) Jean-Sébastien Lantza, Jean-Michel Sahutb, Frédéric Teulon, (2011), "What is the Real Role of Corporate Venture Capital? »JOURNAL INTERNATIONAL DES AFFAIRES, 16 (4), 2011, ISSN.
30) Joel AC Baum and Brian silverman, (2004). Pick winners or build them? Alliance, intellectual and human capital as selection criteria in venture capital financing and the performance of biotechnology startups.Journal of Business Venturing, flight. 19, number 3, 411-436.
31) KA Packalen, (2007). Complementary capital: the role of status, demographics and social capital in the ability of founding teams to obtain resources, Theory and Practice of Entrepreneurship 31 (6), 873-891.
32) Leland, H. and D. Pyle. (1977). 'Informational Asymmetries, Financial Structure, and Financial Intermediation', Journal of Finance 32.
33) Lindsey, L., 2008.Unclear hard limits: the role of venture capital in strategic alliances. J. Finane.63.
34) Manigart, S., van Hyfte, W. (1999) "Post-investment Evolution of Belgian Venture Capital Backed Companies: an Empirical Study", Babson Entrepreneurship Conference Working Paper.
35) Oslo Manual (1992, 1996, 2005), Organization for Cooperation and Development.
36) Marchesnay, M. (2004). Strategic management. Les Éditions de l'ADREG, France.
37) Marco Da Rin, TF Hellmann, M. Puri (2015) A survey by Venture Capital Research, http: //www.nber.org,
38) Marquet-Pondeville S. (2000). Environmental management control of a company. 2 rd Congress of the French Accounting Association.

39) Martí Pellón, J. & Alemany, L. (2006). Do venture capitalists' characteristics affect the performance of the firms they back ?. SSRN working paper series (886546). Rochester: Social Science Research Network (SSRN). http://ssrn.com/abstract=886546.
40) Masayuki Hirukawa and Masako Ueda. (2011). Venture capital and innovation: Which is first? Pacific Economic Review, 16: 4.
41) Matteo Rossi, 2011. Financing of innovation Int. J. Technology Marketing, Vol. 6, no.4.
42) McKaskill Tom, (2009). Invest to exit. A pragmatic strategy for angel and venture capital investors, National Library of Australia Cataloging-in-Publication data.
43) Megginson, WL, Weiss, KA (1991) "Venture Capitalist Certification in Initial Public Offerings", Journal of Finance, 46 (3),
44) Mêlé, N. (2007). Evaluating the management potential of holders of E! technology SME project by venture capital investors on first contact. Master's thesis, UQTR, Trois-Rivières, Quebec.
45) Michael SCHEFCZYK, torsten J. GERPOTT. (2000). Qualifications and turnover of managers and venture capital financed firm performance: an empirical study of german venture capital-investments. Journal of Business Venturing 16.
46) Miles, RE and Snow, cc (1978). Organizational strategy, structure, and process. New York: McGraw-Hill.
47) Mitchell, RK (2000). Venture Analysis Standards 2000. Workbook. University of Victoria. Academy of Management Journal, 43 (5) October, 2000: 974-993.
48) Mollica, MA, and L. Zingales (2008) The Impact of Venture Capital on Innovation and New Business Creation, Working Paper, University of Chicago.
49) Morris, M., Watling, 1. and Schindehutte, M. (2000). Venture capitalist involvement in portfolio companies: insights from South Africa. Journal of Small Business Management, 38 (3).
50) Mothe, C. & Nguyen-Thi, TU (2011). The link between non-technological innovations and technological innovation. European Journal of Innovation Management, 13 (3).
51) Nicolas_Colin, (2016). A Brief History of the World (of Venture Capital) Entrepreneurship, finance, strategy, policy. Co-Founder & Partner @ .The Family Papers # 019.
52) Manigart, S., van Hyfte, W. (1999) "Post-investment Evolution of Belgian Venture Capital Backed Companies: An Empirical Study", Babson Entrepreneurship Conference Working Paper.
53) Masayuki Hirukawa and Masako Ueda. (2011). Venture capital and innovation: Which is first? Pacific Economic Review, 16: 4.
54) Nomo, TS (2008). Exploratory study of the follow-up of investments made in the traditional sector by venture capital companies. Doctoral thesis, Université de Sherbrooke, Sherbrooke, Quebec.
55) Puri, M. & Zarutskie, R. (2012). The dynamics of the business life cycle - venture capital. Venture-financed companies, Le Journal des Finances, V. LXVII, No.6.
56) PIRNAY F., SURLEMONT B., DEGROOF JJ (2006), The determinants of the growth of university spin-offs, Synthesis report, HEC Liège.
57) Sapienza, HJ and Gupta, AK (1994) Impact of Agency Risks and Task Uncertainty on Venture Capital. Academy of Management Journal, 37, 1618-1632.
58) Zarutskie, Rebecca, (2010). "The role of the team's human capital leader on venture capital markets: evidence from new funds", Journal of Business Venturing, Elsevier, vol. 25 (1), pages 155-172.
59) Paige Ouimet and Rebecca Zarutskie, (2011). "Who works for startups? The relationship between company age, employee age and growth", Work documents11-31, Center for Economic Studies, US, Census Bureau.
60) Reinganum, J. (1983) 'Uncertain Innovation and the Persistence of Monopoly', Bell Journal of Economics 12, 618–24.
61) Sorensen, M. (2007). How Smart Is Smart Money? A Two-Sided Matching Model of Venture Capital. The Journal of Finance, 62.
62) Johannes Van Biesebroeck, (2007). "Robustness Of Productivity Estimates", Journal of Industrial Economics, Wiley Blackwell, vol. 55 (3), pages 529-569.