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An Analysis Of Innovation Funding : Une analyse du financement de l'innovation

Hind TADJOUSTI
LM2CE, Faculty of Legal, Economic and Social Sciences
University Hassan 1st, Settat, Morocco.
hindtadjousti@gmail.com

IDLHADJ Youssef
LARETA, Faculty of Legal, Economic and Social Sciences
University Hassan 1st, Settat, Morocco.

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Abstract
As a part of our research work on the financing of innovation, several studies urge us to analyze the sources of financing for innovation.
No one can deny the crucial role of innovation in general and the innovative enterprise particulary in the growth and development of economies. A locomotive that weakens as soon as it looks to find funding. Uncertainty and risks associated with innovation increase reluctance and discourage funders. The dilemma of gain and loss involves a set of stakeholders (entrepreneurs, innovative project developers, public and private investors...).
The purpose of this article is to conduct an analysis of innovation funding while bringing a new conclusion. To do this, we try through this article to present the particularities of SMEs making their financing complicated. Then, this document will aim to expose the financial life cycle of the company in the current context. Before we finish we will try to explore the other variables that influence this funding. Towards the end of this work we will formulate an essay summarizing the analyzes made throughout this work.
The latter is a vision that can serve as a decision-making tool for all stakeholders in the field of innovation.

Keywords*:* Innovation; Financing constraint; Information asymmetry; Decision-making.

Résumé
Nul ne peut nier le rôle primordial de l'innovation en général et de l'entreprise innovante à titre particulier dans la croissance et le développement des économies. Une locomotive qui s'affaiblit dès qu'elle se penche à trouver des financements. L'incertitude et les risques liés à l'innovation augmentent la réticence et découragent les financeurs. Le dilemme de gain et de perte met en jeu un ensemble des parties prenantes (entrepreneurs, porteurs de projets innovants, investisseurs publiques et privés….).
L'objectif de cet article est de réaliser une analyse des financements de l'innovation tout en apportant une nouvelle conclusion. Pour ce faire, nous essayons à travers cet article de présenter les particularités des PME rendant leur financement compliqué. Ensuite, ce document aura pour objectif d'exposer le cycle de vie financier de l'entreprise dans le contexte actuel. Avant de terminer nous allons essayer d'explorer les autres variables qui influencent ce financement. Vers la fin de ce travail nous allons formuler un essai de synthèse des analyses faites tout au long de ce travail.
Cette dernière constitue une vision qui pourra servir d'outil d'aide à la décision pour tous les intervenants au domaine de l'innovation.

Mots clés:
Innovation; contraintes de financement; risqué; asymétrie d'information; prise de decision.

Introduction

Nowadays, the competitiveness between nations has its origins in the creation and development of innovative companies. These are presented as vectors for the development of the economy, but they face enormous difficulties, including financing difficulties (Levratto, 1990). these financing constraints prevent the emergence of innovation(Presses & Po, 2007).

Thus, innovation is often presented as a major growth issue, especially as economies move towards the knowledge economy. In fact, at a time of globalization, the notion of business competitiveness is at the heart of all economic actors at all levels (Aghion, David, & Foray, 2009).

In this context, (Dherment-Férère, 2008) quoted that "to innovate, we must want and power. To desire is the researcher's drive; power is the nerve of the financing war. Without financing, there is no innovation ". it is in this perspective that (Chirkunova, Kireeva, Kornilova, & Pschenichnikova, 2016) think that the success of any innovative project depends on the accuracy of the instrument financing chooses.

At the macroeconomic level, both developed and developing countries are seeking to promote innovation to guarantee their growth and development lasting(Blanchard et al., 2013).

Considered by Schumpeter as the main growth issue, the notion of innovation and the premises for reflection on this notion have made definition of innovation a hard task. Process innovation is the "implementation of new or significantly improved production or delivery methods". It may be considered changes in tools, human capital, and working methods or a combination of these such as install of new or improved software to speed up the claim settlement process and policy issuing(OCDE, 2004). It is in this context that the Oslo Manual has defined four types of innovations: product, process, marketing and organizational innovations (BECQUET, 2014). However, from a microeconomic point of view, the emergence of innovative firms faces many challenges related to uncertainty, the risk of information asymmetry and communication noise between business creators and traditional financing systems. These challenges are mainly related to financing (Cherif, 1999).

Thus, the decline in the self-financing capacity of companies and the states budgetary constraints are a threat to the viability of the model of financing innovation in advanced economies

(BECQUET, 2014). Indeed, one of the main difficulties encountered by the innovative company is the reluctance of some lenders to lend their financial support, because it has not yet proven itself. These uncertainties lead banks to adopt a cautious behavior which frequently resulting in the crowding out effects of these young innovative firms from the financing circuits. This rationing has motivated attention to other forms of financial intermediation (Cherif, 1999). However, SMEs embody an important source of development thanks to their flexibility and adaptability, especially in an erratic context. Despite having specific characteristics, they suffer from under-capitalization and lack of capital crucial for their development. Consequently, their financing is particularly attractive and has allowed the emergence of new mechanisms for financing innovation. A variety of sources of financing conditioned by several variables. Therefore, the governance of innovation activities is becoming more challenging (Grilli, Mazzucato, Meoli, & Scellato, 2018).

Therefore, analyzing of financing mechanisms for innovation is very essential for the competitiveness and development of economies.

Our work justifies its importance by the fact that it is a literature review on the question of financing innovation, and secondly by adding value to the service of innovative companies. As a theoretical study, but of practical importance at the corporate level, our work provides a code of conduct for SMEs that facilitates the decision to finance innovation.

In this work we will try to find out **how innovative companies can be effective in managing their funding sources**? To answer this research problem, we opt for the next plan:
We try through this article to present the particularities of SMEs which make their financing complicated, to expose their financial life cycle, to explore the other variables that influence this funding and at the end to summarize the analysis made throughout this work in the form of a summary graph.

1. Literature review: specificities against constraints of innovative companies?

Around the world, the innovative small and medium-sized enterprise sector plays a leading role in the competitiveness of the economies (Rajapathirana & Hui, 2017) and the creation of new job opportunities.
Hence, the interest is first to dwell on the specificities of these companies in a first place, before

highlighting the constraints faced by innovative SMEs in the search for financing their development.

Before exploring the obstacles to financing SME innovation, it would be commendable to focus on the specificities of SMEs, making their financing special. In fact, innovative SMEs combine several characteristics that make their financing more problematic (Chirkunova et al., 2016). The first specificity of innovative firms is that they have significant external financing needs. In other words, equity financing is relatively little used by these companies(Hughes, 1997). Another particularity is that the majority of SMEs are family structures for which innovation is perceived as a loss of money unlike other companies that focus on innovation. Therefore, the search for external capital is necessary for their development.

Second specificity is the growth policy; SMEs raise more doubts to their sustainability than large companies. These companies are very vulnerable to changes in the economy or the emergence of new technologies in the sector. In addition, they present a risk of exploitation on average higher (It results in particular of the restricted character of the portfolio of activities of SMEs) Third property is the lack of transparency. In fact, the practice of finance in SMEs is marked by informational opacity which is linked on the one hand to less developed accounting and financial information systems than in large companies, and on the other hand to absence of a reference financial market that would impose financial communication practices. In addition to the cost of setting up financing operations on the financial markets (valuation, audit, etc.). Another characteristic is the often fluctuating and highly uncertain profitability of these companies. Thus, financing innovation is financing something immaterial with a monetary value that is difficult to estimate.

Finally, innovative SMEs and micro-enterprises are more likely to be subject to strong external financial constraints, as the information asymmetries they face tend to be more pronounced. Therefore, it is essential to study the constraints facing innovative SMEs in order to find the necessary means to strengthen their financing.

1.1. Self-financing constraint:

Most companies rely on their own funds to finance their investments. However, when it comes to a small innovative company that does not have sufficient internal financing capacity. Thus, it is

obliged to look outside to ensure the means of its development. This capital weakness seems to constrain them directly to access to bank financing (Allegret & Baudry, 1996).

1.2. Bank loans Constraint:

Companies may prefer bank financing. Banks are considered as the main financial partner of SMEs. However, it is no longer the case when it is a young innovative SME. These companies have very risky activities that make banks reluctant to finance them. SMEs do not meet the traditional criteria required by banks in terms of tangible assets. These companies are characterized by the preponderance of intangible assets (research and development (R & D), technical skills, know-how or ideas) that do not constitute sufficient guarantees in the event of possible losses to lenders (OECD, 1986).

Thus, by referring to (Williamson, 1988) firm theory, which emphasizes specificity as a central role of assets, the fact of innovating necessarily involving specific assets raises the problem of resale in the event of liquidation, which makes it difficult to innovative SMEs to obtain a bank loan.

1.3. Shares and bonds Constraints:

Fund raising through public share issues is problematic, SMEs do not always have access to this market. Access conditioned by the meeting of a number of conditions generally beyond the reach of SMEs (size, requirements of transparency and communication ...).
On the other hand, the stock market is an alternative means of financing enabling companies to raise funds and diversify investors. However, because of the financial and administrative costs of the IPO, the conditions of admission, the involvement in terms of financial communication and good governance.

1.4. Information constraints:

When we analyze the problem of financing innovation, we are always faced with the question of information. Indeed, any innovative project is accompanied by the existence of asymmetrical information that influences the obtaining of external capital by an innovative SME(Agénor & Canuto, 2017). Indeed, when negotiating a financing transaction the parties may be better informed than others. For example, the managers of an innovative company looking for external capital are better informed about the characteristics of the project to be financed than potential investors (Cherif, 1999).

A double effect of information asymmetries arises:

A first effect that manifests itself in ex-ante. When an investor wants to finance a project, he must perform an analysis to select the good projects of the bad ones; that is to say, those which have no real interest. This problem of adverse selection initiated by (Akerlof, 1970) emphasizing the difficulty of a market equilibrium. An analysis of the financial market (Ross, 1977) extended to innovative companies. Thus, (Jensen & Meckling, 1976) analysis, inspired by the studies conducted by (Adam & André Farber, 1989) on the innovative SME, highlights the conflicts of interest that may arise between different categories of capital contributors in addition to the complexity control mechanisms that need to be implemented in bilateral relations between investors and company executives. Certainly, in the context of this agency relationship (Jensen & Meckling, 1976) et (Charreaux, 1989) argue that the lack of transparency reduces the control of the investor and creates agency costs thereafter.

A second ex-post effect may emerge, i.e. after funding has been granted. A higher risk of conflict when it comes to an innovative company. For example, executives may incur unnecessary expenses for the development of the company, thereby, reducing the amounts available to compensate external investors (Cherif, 1999).

These obstacles have led to a situation of under-capitalization and a lack of capital crucial for the development of SMEs (Pellegrino & Savona, 2017), victims of the effect of crowding out the traditional financial system. As a result, the emergence of new forms of financial intermediation has emerged by seeking to overcome these obstacles.

2. Financing Innovation: A Multivariate Process

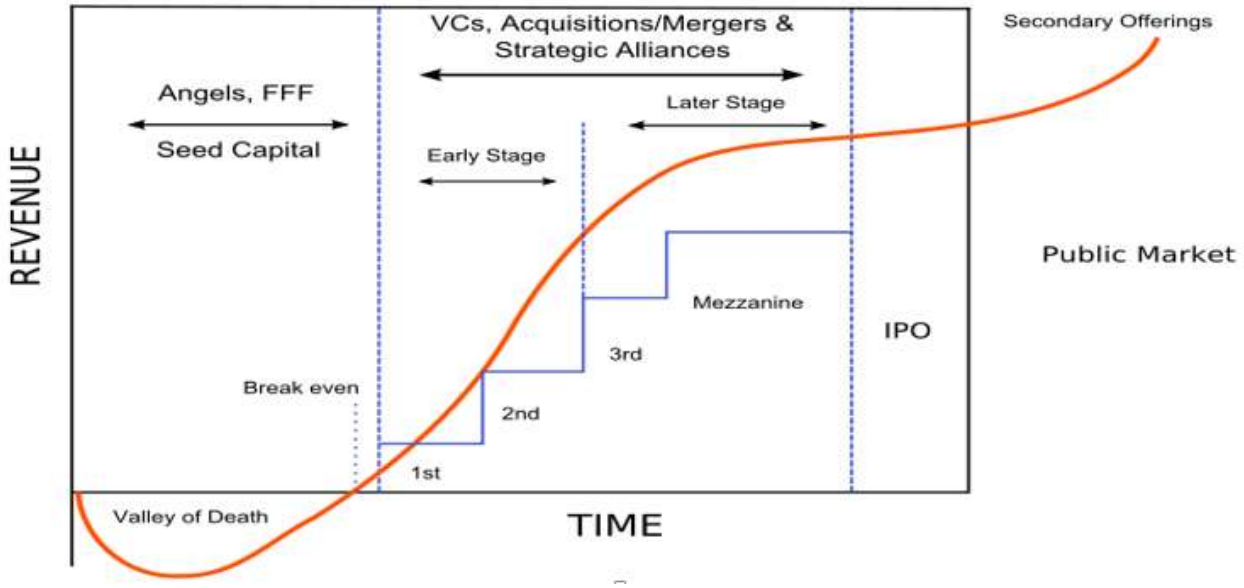
Through the analysis of the characteristics and constraints of SMEs, we notice a finding that refers to the failure of traditional sources of financing (market or bank).
As a matter of fact, efforts to promote innovation continue to unfold in the quest for effective financing. Several classifications can associate each mode of financing with innovation. This will be the subject of the second part of our article.

It is impossible to find a type of financial system that would promote innovation in general in parallel with the heterogeneity of financial systems, that of innovations and their stages of development (Delaplace, 1999).

2.1. Financing according to the development phase of the company

As we have tried to show above, innovative SMEs are facing funding difficulties. Nevertheless, during its life cycle, the young innovative company knows phases of development, which correspond to different financing needs (García-Quevedo, Segarra-Blasco, & Teruel, 2018). Presented in four major phases by (Cardullo, 1999), each phase reflects specific financing needs and uses different financial actors as shown in the financial life cycle of a company in Figure.1(Novoa, n.d.):

Figure 1 : Startup-financing cycle



Source: Novoa, J. understanding differences in startup financing stages.

The different phases of the company's life cycle correspond to different needs.

2.1.1. Seed Stage:

- **Characteristics of the phase:**

The seed phase is the one that precedes the creation of the company. This is a critical phase of the innovative young company's intense development cycle in terms of spending (R & D, initial business plan, market research, and prototyping). In fact, when designing the product, SMEs face significant technological uncertainties regarding the success of their R & D activities. During this phase, the failure rate can reach 70% (Cossu, 2018).

❖ **Possible sources of funding:**

For the seed phase, funding is primarily public and / or personal contribution of the creator (s). Seed funds can also be used throughout the first part of the SME's life. Once the stage called "valley of death" passed and the growth potential of the company has been validated by its market, then other funding may intervene (Bagard, Bagard, Pme, & Fin, 2014). During this phase, funding sources generally come from business angels and personal funds from entrepreneurs and their families "the 3F: Friends, Family and Fools".

2.1.2 Creation phase (startup stage)

❖ **Characteristics of the phase:**

The company does not yet have a market share which makes it difficult to evaluate and predict future commercial success. Characterized by intangible assets and years of deficit in perspective, investors face a very high risk making it difficult to obtain financing.

❖ **Possible sources of funding:**

3F money is usually supplemented by university seed money and business angels. State support may also be required at this stage. These take the form of tax assistance, direct subsidies or non-refundable zero-rate loans in case of failure (Savignac, 2007). As for the banks, they are rarely active during this phase due to the lack of guarantees offered and the weak repayment capacity of innovative companies.

2.1.2. Initial development phase or launch (Early Stage).

❖ **Characteristics of the phase:**

At the end of the R & D phase, marketing begins. The company offering new products opens up to the market to create needs among innovative consumers (advocates), ie consumers who adopt new products first (Bagard et al., 2014).

Low competition makes production costs very high, so research and development costs are spread over a small amount produced.

During this phase, the company attends its first years of commercial activities, it must invest heavily in advertising campaigns. As a result, production and marketing expenses are very significant. Capital requirements are still important and predictions of the commercial success of the project are difficult(SECO, 2012). The reluctance of banks to grant credit in the early stage seems to be justified.

❖ **Possible sources of funding:**

At this stage, the innovative company can call on specialized public investors or a few private players, especially business angels who bring capital, network experience and time. Anglo-Saxons speak of smart money (intelligent money) (Diamane, 2007).

2.1.3. Growth stage (Later stage)

❖ **Characteristics of the phase:**

At this level, the company faces a double challenge. It must manage the consequent increase in its activity and sales, that is to say, its internal growth, as well as its external growth to face the competition. As a result, the company's financing needs are multiplying to maintain its growth rate, maintain its market share and grow.

❖ **Possible sources of funding:**

The potential of the verified market and the first financial results achieved, we are witnessing the intervention of development capital funds and the IPO to secure financing.

2.1.4. Maturity or post-creation phase (maturity stage)

❖ **Characteristics of the phase:**

At this stage, the company is well established and is fully mature and developing. The innovative company becomes like any other SMEs, it tries to renew the competitive advantages.

❖ **Possible source of funding:**

The company can more easily access bank loans and open its capital to the public via an IPO. The maturity phase is generally marked by the end of the partnership between the company and the investor(Manigart, 2016). In other words, at this point, the venture capital funds are pulling out of the company(Bagard et al., 2014) and are being replaced by banks and investment funds. We try to summarize the financial life cycle of the innovative company in table.1:

Table 1 : Financial life cycle: characteristics and source of funding

Phase	Characteristics	Source of funding
Seed Stage	- Intense spending (R & D, initial business plan, market research, and prototyping).	Founders, love money (family and friends)

	Lack of market share makes it difficult to evaluate and predict future business success.	
Creation phase (startup stage)	- The company does not have a market share yet, which makes it difficult to evaluate and predict future commercial success. - Creation of the legal structure and search for first funding.	- Founders - 3F: friends, family and fools - Seed fund - Public aid - Loans of honor
Initial or launch development phase (Early Stage).	- Develop production and distribution capacities. - Bring innovation to the market - Validate the business model	- Bank loans - Business Angels - Capital risk - Merged acquisitions and strategic alliances
Growth stage (Later stage)	Strengthen sales teams and develop marketing in order to get sales off the ground	- Bank Loans - Capital development - IPO - Financing Mezzanine
Maturity or post-creation phase (maturity stage)	Full Matured and developed company tries to renew the competitive advantages.	- Bank-loans - Stock Exchange

Source : auteurs

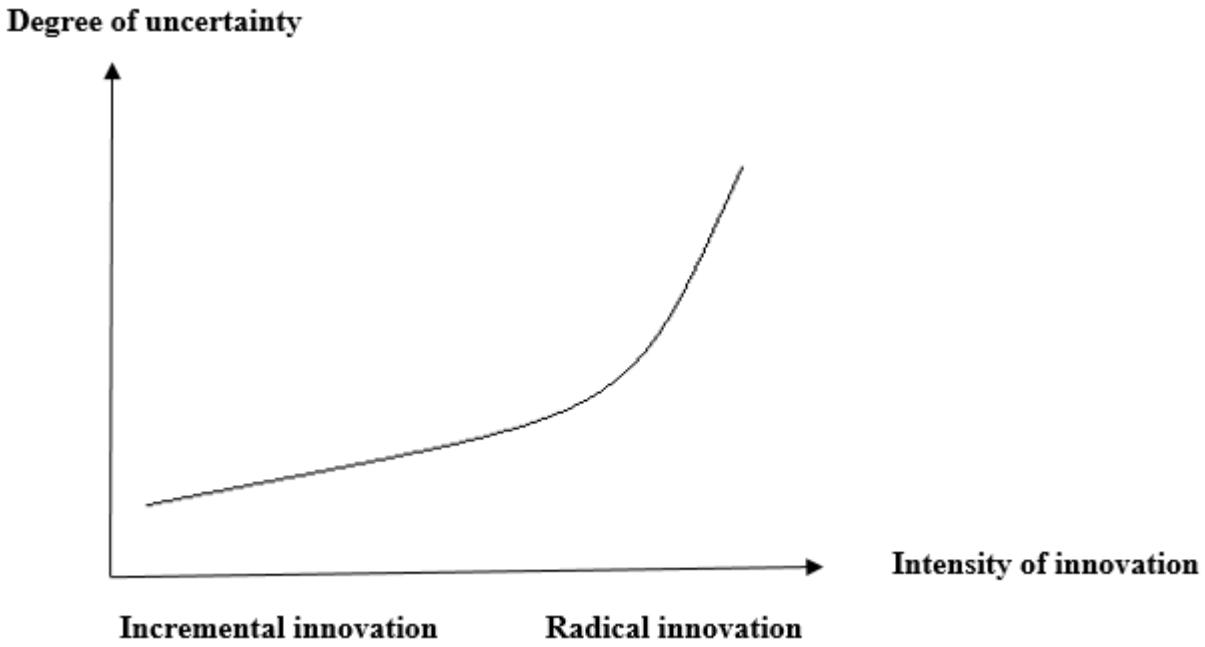
2.2. What financing for which type of innovation?

The analysis of innovation funding can be done from another perspective. Indeed, (Freeman & Perez, 1988) distinguish between radical innovations and incremental innovations. The first

radical innovations mark discontinuities, technological breakthroughs based in principle on scientific advances: health / medicine (biotechnology, medical imaging, etc.), information technology (hardware, microprocessors, software, etc.), while incremental innovations refer to the improvement of the products or the processes.

In other words, the analysis of the intensity of innovation makes it possible to distinguish 3 levels of innovation: Radical innovation leads to the birth of a radically new product, systematic innovation brings about a major change in products or technologies business processes and gradual innovation does not significantly change the products or processes. However, it is clear that a set of small incremental innovations, the sum of which allows a company to distinguish itself from its competitors, is less risky than a major innovation that risks being rapidly imitated by competitors(Julien & Sppierre, 1996). Small businesses innovate products and processes, most often on a gradual basis. Just over 10% of them make systematic or radical innovation(Julien & Sppierre, 1996). It is in the same way that Julien, St-Pierre and Beaudoin argue that: " from the financial theory point of view, the problem of financing innovation and the purchase of advanced technologies in SMEs can be considered as any problem of financing an investment project that may involve a high degree of uncertainty and therefore risk ". (Julien & Sppierre, 1996). Therefore, Innovation is linked generally to uncertainty. Moreover, a positive relationship between the intensity of innovation and the degree of uncertainty associated with it, especially by potential financial partners, lead to the graph (Guilhon & Montchaud, 2003) depicted in Figure 2.

Figure 2 : Intensity of innovation/ degree of uncertainty



Source : Guilhon, B., & Montchaud, S. (2003). Le capital à risque et les jeunes entreprises innovantes : problématique et enjeux. *Revue Internationale P.M.E.: Économie et Gestion de La Petite et Moyenne Entreprise*, *16*(3–4), 53

Freeman and Perez (1988) consider projects with radical innovations as uncertain and qualify projects to implement incremental innovations as risky projects. Before analyzing its contributions, it is highly recommended to understand first the difference between risk and uncertainty. This can't be done without introducing the difference made by(Knight, 2012). Lastly uses the vocabulary of probabilities, he defines risk as a future whose distribution of possible states is known. In other words, it is a situation where future events are predictable. On the other hand, the 'knigthian' uncertainty corresponds to a future whose distribution of states is not only unknown but also impossible to know. i.e. A situation where nothing is predictable.

Thus, the degree of uncertainty allows us to characterize the type of innovation that in turn affects the funding of companies. For all innovating firms, the possibility of obtaining funding is related (negatively) to the degree of uncertainty of the project perceived by the financial environment.

The degree of uncertainty estimated would be greater if the innovative project is carried by a new enterprise. As a result, start-ups would find it more difficult to secure funding (Freeman and Perez, 1988).

Therefore, based on its theoretical contributions, the financial life cycle analysis presented above and the intensity of innovation, we can make the following juxtaposition:
The bank financing, the stock market are inappropriate for financing the first phases of creating innovative companies. Especially when the project carried by these companies is linked to a radical innovation.

In fact, the uncertainty that marks breakthrough innovations makes it difficult to obtain funding. Therefore, it appears that the banking system is unsuitable as regard to the financing of innovative start-up companies. Especially if it is related to radical innovations. In principle, it is more inclined to grant loans to established firms wishing to implement, for example, incremental innovation. The turn down of technological start-ups by this intermediated financing channel can be explained by the very characteristics themselves of these companies (Guilhon & Montchaud, 2003).
Similarly, when it comes to crowdlending. In fact, breakthrough innovation is an innovation resulting from a heavy R & D process and with a structuring impact making its success uncertain for lenders. These are part of a projection lens, based on an unpredictable history and continuity of development when it comes to a break. Unlike incremental innovation with predictability and acceptable risk, crowdlending is a perfectly suited tool for financing.
In short, these sources of funding can serve businesses when it comes to more incremental innovations, with a high probability of success and a kind of guarantee for lenders. Notwithstanding, Business Angels, venture capital and public aid are the main vectors of breakthrough innovations.

Venture capital gives more radical product innovations. Firms backed by venture capital are adopting more innovation strategies than imitation. In addition, it accelerates the transition of the new product to the market.

On the one hand, Gompers and Lerner highlight the first lesson on the innovative capacity of companies where venture capitalists act as shareholders. These companies file more patents than

those where the shareholding does not include venture capitalists, which illustrates a greater innovative capacity. Noticing that these firms also tend to file more patents for radical innovations than other firms (Gompers & Lerner, 2001).

On the other hand, economists have tried to characterize the evolution of the "absorptive capacity" of companies, the latter reflecting their R & D strategy on how to assimilate, exploit and create knowledge. Thus, a high absorption capacity underlines an active role of the company in the management of knowledge, in relation with other actors. It has been shown that a venture-backed firm is more likely to use a "buy-and-do" strategy, which leads to the construction of absorptive capacity(Da Rin & Penas, 2007). The role of venture capital is driving this strategic direction, which accelerates the dynamics of innovation and, ultimately, the productivity gains of an economy. Logically, it appears that public policies supporting innovation would benefit from developing incentives for venture capital by guiding companies towards innovation strategies that are more conducive towards economic growth. These studies show that venture capital is a factor that multiplies the innovative capacity of companies while promoting the emergence of new products, breaking with the products previously consumed.

Therefore, this method of financing appears as the sine quanon condition for the revitalization of the entrepreneurial fabric of our economies(Lorenzi & Glachant, 2008). Public support can directly encourage disruptive innovations given their undeniable impact on economic growth. Thus, the French Minister of Economy and Finance, Bruno Le Maire, campaigned for the Breaking Innovation Fund to be established at the beginning of 2018. According to him: "The role the state in economic matters is to invest in the future, to fund breakthrough innovation, to protect our strategic sectors and to build European champions ". These comments reinforce the idea that the financing of disruptive innovation is mostly in the hands of public efforts.

Table.2 illustrates how funding can be based on the intensity of innovation and therefore the level of uncertainty:

Table 2 : funding based on uncertainty and type of innovation

Type of innovation	Uncertainty	Possible method of financing
Breakthrough Innovation	Strong	Founders; 3F: friends, family and fools Public aids Seed fund, capital risk
Incremental Innovation	Low	Bank Loans, Stock Market, Crowdlending, Growth Capital

Source : auteurs

Towards the end of our article, we try to propose a synthesis of the results obtained through a rich review of literature on the subject. We will present this synthesis These relationships will be explained in the following.

3. An Essay Synthesis

From the previous analyzes, thanks to the theoretical contributions, it has been possible to demonstrate, that innovation is intimately linked to two elements which are phase and intensity. We will then explain how the interest of the financials and public aid intervene in the world of innovation.

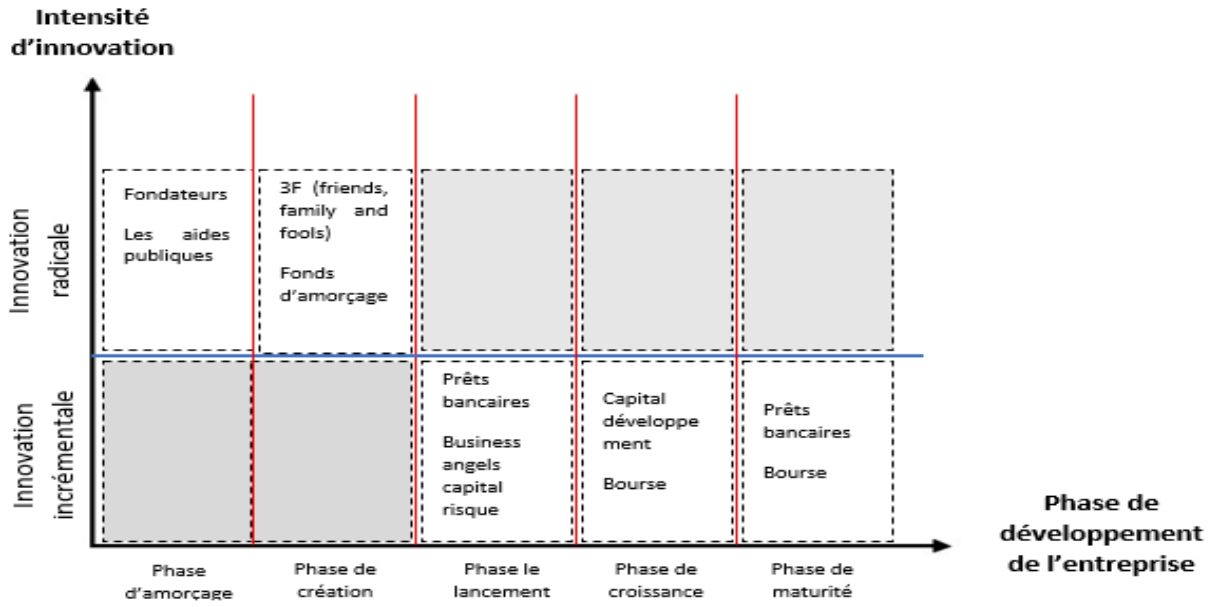
Assuming that the phase is a factor in reducing uncertainty. As we move through the life cycle of the company, sources of funding are increasing. In other words, once SMEs escape the early stages of their life cycle, the interest of financiers to grant loans increases. Therefore, we deduce a relation in the same direction between the first two components, which are the development phase and the interest of the financials.

In the same way, let us do the same reasoning to analyze the relationship between the interest of financials and the intensity of innovation. It has been concluded in the preceding paragraphs that there is a reluctance on the part of financiers to engage in disruptive or radical innovation projects as a result of the risk of uncertainty they represent and vice versa. The result is an inverse

relationship between the interest of financials and the intensity of innovation. Thirdly, it seems very relevant to introduce the role of public authorities. Already initiated by Lachman, the latter opposed on one axis the interest of the financiers and the implication of the public financing. One could adopt a similar logic by trying to analyze the relationship of public authorities with the intensity of innovation and the development phase.
It is from the analysis of the financial life cycle of the company that it has been noticed that public investments are very present in the first two phases of creation of the company. Indeed, these R & D phases, which are the most crucial for the development of innovation and often marked by great uncertainty, are not well supported by all the different donors. It is also at this stage that the public authorities generally play a fundamental role before withdrawing from the market during the intervention of other stakeholders (banks, stock exchanges, venture capital, etc.). So, we can conclude the existence of an inverse relation between the other two components of the innovation map of the innovation namely the intervention of the public authorities and the phase of development.

As for the relationship between the intensity of innovation and the intervention of public authorities, it can be explained by the fact that product innovation projects resulting from a radical process or introducing a breakthrough innovation rarely find a way of financing. On the other hand, the expected return on this type of project in terms of economic output and job creation remains very high. The need to find a way to better evaluate and support such projects is needed and this is where governments can play an important role. Subsequently, a positive relationship (in the same direction) will link these two variables (intensity of innovation and government intervention). Figure 3. of “innovation map” illustrates the relationships that bind all of these variables:

Figure 3 : The innovation map



Source : auteurs

Conclusion

In conclusion, we would like to recall some of the key points made in this article. Indeed, we tried to recall the specificities of innovative companies making their financing problematic.

Innovation is a complex phenomenon whose repercussions are marked by a greater or lesser degree of uncertainty depending on the type, phase and intensity. Innovation projects are less easy to finance during the early stages of their life cycle and even more when it comes to breakthrough innovations. Thus, despite the progress made in terms of financing innovation as well as the progress of support and financing of innovation, the funding offer is not always extended to all projects. Therefore, effective analysis of innovation financing must take into account all of these determinants.

Finally, collaboration between all stakeholders (private and public) must be established to promote innovation and encourage the emergence of innovative SMEs that are sources of growth and development.

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