

Innovation and Access to External Funding: The Unique Case of Cameroonian Start-Ups



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ABSTRACT: This article studies the effect of the types of innovation of start-ups (product, process, business and organizational innovation) on access to external funding. Thus, the main objective is to identify the specific determinants of innovation likely to influence access to external funding for Cameroonian start-ups. To achieve this, we have adopted a quantitative methodological approach through the administration of 105 questionnaires on start-ups in the cities of Douala and Yaoundé. The collected data were analysed by SPSS software and the logistic regression method was used. The results of these analyses show that the more Cameroonian start-ups adopt commercial innovations, the more likely they are to access external funding.

KEYWORDS: Innovation, Types of innovation, start-ups, External funding.

I. INTRODUCTION

Innovation is commonly seen as an important factor in economic activity. At the micro level, it has an impact on business performance (Crépon and lung, 1999) and has an impact on the survival of small businesses, in particular start-ups (Duguet and Monjon, 2001). At the macro level, it has a strong influence on economic growth and, consequently, on employment. Innovative activity and the creation of new knowledge are generally considered to be the main engine of economic growth, capable of creating new markets and producing competitive advantages that promote the performance of small firms (Schumpeter, 1934).

The acceleration of innovation over the past two decades has made the issue of financing innovation even more acute. In France, for example, several recent articles have been devoted to this question, notably Sauv  (1999). However, the theory of financing remains mainly based on the article by Williamson (1988), which concludes, among other things, that innovation is mainly financed by companies' own funds. The financing of innovation is a critical topic in the finance and growth literature. According to King and Levine (1993), the ability of a financial system to support high-return innovations is the primary means by which GDP growth is affected. However, the funding decision can be seriously compromised by information asymmetries.

By their very nature, innovative small businesses, especially start-ups, are more likely to suffer from financial problems. Due to their informational opacity, their low tangible assets to pledge and the risky nature of their strategies, most new potentially innovative companies are less credible and face significant obstacles in financing their investments. In this regard, the type of innovation to be financed, the characteristics of the company and its relationship with the lending bank play a crucial role in the actual capacity to introduce innovations.

Moreover, the empirical literature on the financing of innovation is extremely rich but far from conclusive. A large number of articles have provided conflicting evidence on the relationship between access to external finance and innovations including a negative effect between firms' innovation activities and access to external finance (Mulkay et al 2001.; Savignac, 2008; Hajivassiliou and Savignac, 2011; Blanchard et al., 2013). Likewise, Mohnen et al. (2008), Mazzucato (2013) and Wu et al. (2016) find that difficulties in accessing external funding increase the likelihood of failure or abandonment of innovative projects.

The informational opacity of a company's business plans can have a profound impact on the decision of lenders to provide finance if they feel they cannot reliably assess the quality of the business on the basis of perceived value and of their innovative

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activities (Jensen and Meckling, 1976; Carpenter and Petersen, 2002). These difficulties will result in higher costs for financing to offset this source of risk.

Innovation projects have many characteristics that could lead to difficulties in obtaining funding from the traditional perspective of asymmetric information and agency problems (Mina et al, 2013). However, it is unclear whether the mechanisms for financing innovation constitute a difference in nature or simply exacerbate the potential financing problems of other types of investment. As a result, some authors find that small innovative companies tend to have riskier business models, which are important for creating new markets but which are also difficult to assess by capital investors. They often rely more on intangibles, rather than physical assets, but intangibles are difficult to value because they are context specific, and therefore difficult to use as collateral for loans. The evidence on this point is inconclusive, but some authors suggest that the most important companies in the economy often have the most difficulty in obtaining financing (Freel, 2007).

Another group differs from the first and demonstrates that the returns to innovation can be uncertain, which makes financing innovation more risky (Hall, 2002; Coad and Rao, 2008; Mazzucato 2013). Only a fraction of companies tend to experience significant growth as a result of investment in innovative activities, with many products not being successfully commercialized or simply failing in the market. According to these authors, this uncertainty problem can be particularly acute for small companies who do not have the scale necessary to invest in multiple projects and therefore risk “putting all their eggs in one basket” (Freel, 2007). Previous research has shown that the returns to innovation can be very uneven, with a small number of innovative projects leading to large gains but most yielding little (Coad and Rao, 2008). Large companies are able to present more diverse portfolios, and while they experience more failures, they are also more likely to make at least one highly profitable innovation. Moreover, the empirical literature on the financing of innovation is extremely rich but far from conclusive. A large number of articles have provided conflicting evidence on the relationship between access to external finance and innovations including a negative effect between firms' innovation activities and access to external finance (Mulkey et al 2001,; Savignac, 2008; Hajivassiliou and Savignac, 2011; Blanchard et al., 2013). Likewise, Mohnen et al. (2008), Mazzucato (2013) and Wu et al. (2016) find that difficulties in accessing external funding increase the likelihood of failure or abandonment of innovative projects.

However, we regret to note that few empirical studies on the issue of financing innovation have been devoted to a detailed investigation of the data produced in the most recent surveys (Mina et al, 2013; Blank, 2013; Lee and Drever, 2014). Thus, this article aims to specifically analyse access to external financing for small innovative businesses. From this arises the following research question: what are the determinants of access to external financing for innovation by small Cameroonian businesses? The main objective of this empirical study is therefore to identify the specific determinants of innovation likely to influence access to financing for Cameroonian start-ups. To achieve this, we articulated the paper around three specific points. The first point will present the one-off theoretical analysis on access to external funding, a second on the methodological estimate, we will end with a presentation and discussion of the results.

II. THEORETICAL OBSERVATION BASIS OF THE STUDY AND FORMULATION OF RESEARCH HYPOTHESES

In this section, we will discuss the stylized facts of start-up innovation financing.

A. Stylized facts on the problem of financing start-up innovation

Schumpeter in the theory of economic evolution (TEE, 1935) and business cycles (BC, 1939), Capitalism, Socialism and Democracy (CSD, 1974) develops two conceptual approaches to innovation. First in TEE (1935), innovation is described as a phenomenon linked strictly to a particular agent: the entrepreneur who performs the new combinations. Therefore, innovation is summed up in the execution of new combinations: we speak of the phenomenon of creative non-destruction. Later in BC (1939), the definition is simply extended to the modification of the production function. The second concept is developed in CSD (1974). It integrates more factual observations and sees innovation as the result of laboratory work within large companies.

According to Ülgen (2007), there are therefore two levels of risk in innovation operations: the risk associated with any economic activity in decentralized markets and the risk specific to innovation activities which, defined in the broad sense of Schumpeter, are attempts to go beyond established structures. According to the author, the financing of innovation does not have the same characteristics and does not involve the same risks as the regular financing of a routine activity. The risk of default is increased by the innovative nature of the projects but also the liquidity risk permeates the commitments insofar as the innovation is generally a project whose results can only be observed in the medium or long term.

The stylized facts review shows that when information on the innovation project is asymmetric, achieving a balance becomes problematic. The rationing observed by intermediaries with regard to the financing of innovations by the market reflects the limits of a stochastic analysis which considers financing mainly from the angle of risk and poses the problem of the viability of the process of economic growth.

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The issue of financing innovations reveals that the economic dynamic is both real and monetary. It is real when we consider only the innovative behaviour of industrial firms. According to Ülgen (2003), the dynamic is also monetary, not only because it involves financing networks such as the banking system, but also because it is affected by banking and financial innovations. Thus, Schumpeter's process of creative destruction can only be effectively envisioned if one considers together the real and financial aspects of productive operations. The entrepreneur's vision of creating a dynamic of evolution is largely linked to the financing conditions of the projects developed. As Schumpeter pointed out (1935), economic action cannot be explained without taking into account monetary relations. The entrepreneur needs to finance his projects in order to lead to new productive combinations so that access to the means of finance is the power to control the level of economic activity at a given moment (Ülgen, 2007). The implementation of new projects requires considerable investments and a relatively long payback period. Support from funders, including the banking system, in the medium or long term appears to be a sine qua non for the achievement of innovations.

Thus, it is not surprising that innovative activity is a catalyst and a major reason for obtaining external financing. In its simplest form, this was to raise external funds for the purchase of key equipment, the development of buildings or the recruitment of staff, and it could be a one-time event (as in the case of a growing art gallery that purchased new equipment to develop high quality art prints). However, in the majority of cases, R & D was much more complex and was generally part of a long, continuous and often uncertain process, especially for early stage companies. The majority of R & D companies, whether short-term or long-term innovations, have sought external funding early in the innovation cycle process, i.e. for companies in the start-up phase, from the initial concept of the business (Wilson and Silva, 2013). Although some of these companies adopted a contract R & D model in order to provide an initial revenue stream, they generally recognized from the outset that external funding would be required to pursue their own innovative R & D (Mina et al, 2013).

III. THEORETICAL ANCHORING AND FORMULATION OF HYPOTHESES METHODOLOGICAL APPROACH

A. Theoretical linking

Access to external finance has been identified as a major obstacle to the growth of young innovative companies. A specific stream of the literature has emphasized the "funding gap", which is configured when a company has potentially profitable investment opportunities but insufficient funds to exploit them (Storey, 1994, Deakins, 1996, Nesta, 2009, Cosh et al, 2009). It can arise from agency-related costs which create a wedge between the cost of external and internal funds, thus making some innovative projects profitable only if they can be financed by internal funds.

B. Innovation theory and access to external funding

According to Schumpeter (1942), companies will still have to invest a significant amount of resources to finance their innovation activities. The author in Innovation Theory believes that the difficulty of SEs accessing external funding can be solved through innovation activities, since innovation activities require a lot of injection of financial resources. It is in this sense that Teece (1992) shows that the most innovative companies are likely to access external financing. Thus, according to Schumpeter's theory of innovation, more innovative companies are more likely to access external financing than less innovative ones.

However, stylized facts mobilized in the work of Mina et al (2013) show that capital providers reward innovative firms to a degree not found in the UK. This may be due not only to different levels of risk aversion specific to the innovation or to the different (perceived) average quality of the innovation in the two countries, but also to the type of innovation and the results obtained from the process. Innovation, as uncertain innovation activities negatively affect the supply of finance, in line with the expectation that companies undertaking risky projects incur higher external costs and have access to sub-optimal financial resources (Mina et al, 2013). However, the authors also find that these results depend on the innovation measures or indicators observed (number of patents obtained, level of protection of intellectual property, for example). Despite the influence that innovation indicators can have on access to finance, there is still a disparity in access to external finance depending on whether it is in US or UK companies (Mina et al, 2013).

C. Information asymmetry theory and access to external funding

Companies that undertake high-risk innovative projects tend to have informational advantages over external agents, for example when the risk does not originate from commonly observable external sources but is rather idiosyncratic to the activities of the companies. Thus, the informational opacity of a company's policies can have a profound impact on the decision of capital investors if they feel that they cannot reliably assess the quality of the company on the basis of value, perceived from their innovative activities (Jensen and Meckling, 1976; Carpenter and Petersen, 2002).

Based on the foregoing, we can confidently state that innovative projects have many characteristics that could lead to difficulties in obtaining funding from the traditional perspective of asymmetric information and agency issues. However, it is

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unclear whether the mechanisms for financing innovation constitute a difference in nature or simply exacerbate the potential financing problems of other types of investment. This is why we believe that access to finance can depend on the type of innovation

However, the evaluation of Research and Development (R & D) projects tends to require a different set of skills from other types of investments (Mina et al, 2013). This can exacerbate moral hazard problems as there is no market for external capital given the impossibility of full disclosure and full understanding of all the signals that would be needed to properly assess innovative projects. As a result, external capital will then be a priority and this premium can subject R & D investments to particularly severe financial constraints, as is the case with studies which estimate the sensitivity of R & D investments to cash flows (Carpenter et al., 1998; Mulkay et al, 2001; Brown and Petersen, 2009; Bond et al, 2010). Thus, in entrepreneurial finance, a high environmental uncertainty and a high information asymmetry between the entrepreneur (s) and the investors considerably increase the transaction costs involved in the financing (Mahto et al., 2018). Storey (1994) concludes that the existence of a financial 'gap' for small amounts is likely due to relatively high transaction costs, but adds that 'there is no evidence of market failure in the market - meaning of government intervention". Some studies show that only a minority of companies want to grow and very few use equity financing to do so (Hakim, 1989, Vos et al, 2007).

D. Theory of transaction costs and access to external financing

Entrepreneurial finance is an inefficient ecosystem (Mahto et al., 2018), where transaction costs are quite high. The prevailing inefficient system has also resulted in a system where location advantages inhibit the development of entrepreneurial businesses in areas that do not have a strong network of financial actors, such as banks, venture capital (VC), business angels and corporations. The inefficiency of the ecosystem is also due in part to the specialization of financial intermediaries, such as angel investors and VC firms, which specialize in a specific industry or in a specific innovation process step. We believe that the entrepreneurial ecosystem is fertile for the development of specific innovations to address some of the inherent inefficiencies. The distributed and profitable characteristics of the innovations will facilitate transactions in the system, where the likelihood of opportunism and uncertainty is low, and where trust and security are high. Business, product, process, and organizational innovations can significantly reduce transaction costs for stakeholders in the entrepreneurial ecosystem, such as entrepreneurs, angel investors and VC firms. The main cost reduction is achieved by reducing the cost of searching and eliminating third-party middlemen in the system. The type of innovation can help solve many of the problems that hinder the development of a robust entrepreneurial ecosystem at the local level for economic development (Mahto et al., 2018; Mahto and McDowell, 2018).

The transaction costs involved in financing startups are so high that many entrepreneurial ecosystems have several redundant entities competing with each other, resulting in significant inefficiencies in the system (Mahto et al., 2018). Many investors, especially venture capital (VC) firms, design their own systems and practices to cope with the high information asymmetry and uncertainties inherent in the entrepreneurial finance ecosystem (Mahto and Khanin, 2013). Most VC firms and angel investors only specialize in certain sectors, while some VC firms prioritize entrepreneurs or the quality of firms in their investment decisions (Khanin et al., 2008). In addition, entrepreneurs reduce their transaction costs by preferring reputable VC investments, even if this entails significant costs (Mahto et al., 2018). Even with the prevalent strategies for dealing with high transaction costs, some VC investors still refine their strategies by focusing on specific characteristics of the entrepreneur such as reputation or their business (Mahto and Khanin, 2013). We believe that innovation and more specifically the type of innovation could be useful in reducing this opacity of innovative projects.

IV. FORMULATION OF HYPOTHESES

The theoretical grounding on our subject is the basis of the link between the type of innovation (commercial, product, process and organizational) and access to external funding. Indeed, the paper examines whether access to finance strengthens business innovation in Cameroon. Innovation remains an important channel through which young companies increase their productivity. However, young African companies, including Cameroonians, are ranked far behind other countries in terms of innovation (AfDB, 2008). African countries are ranked far behind in the Global Innovation Index, between 49 and 141 for the period 2009 to 2015, out of 141 countries with most African countries at the bottom of the ranking (Global Innovation Index, 2015).

Beck et al (2013) demonstrate that young companies subject to financial constraints find it difficult to innovate or develop and are therefore unlikely to engage in innovative projects. This observation is further reinforced by Demirgüç-Kunt and Klapper (2013), who confirm that the capacity of African companies to innovate is severely limited by the lack of access to finance. This result is consistent with the opinion of Beck (2006) who asserts that African companies are limited by the lack of financing to carry out innovations.

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Moreover, the available literature shows that young companies that innovate in products and processes are more likely to access external financing (Beck and Demirgüç-Kunt, 2006; Mina et al, 2013). In other words, product and process innovation is positively and significantly influenced by access to external funding. However, Gorodnichenko and Schintner (2013) find in their work that these results are opposite when it comes to young companies with national capital. Indeed, the authors show that young companies with national capital have great difficulty in carrying out innovation and export activities and therefore have difficulty accessing external financing; even so, the cost of financing is high.

Based on the above, however, we believe that product and process innovation may be less opaque and may influence access to external finance for start-ups. Therefore, we make the following assumptions:

H1: the more young companies adopt product innovations, the more likely they are to access external financing

H2: the more young companies adopt process innovations, the more likely they are to access external financing

Other types of innovation that can influence access to external finance for start-ups are business and organizational innovation. Indeed, the literature establishes a link between business and organizational innovation with access to external funding. It emerges in particular from the work of Ayyagari et al (2011), Safoulanitou et al (2013) that organizational innovation is more likely to significantly influence access to external financing than commercial innovation. Unlike previous authors, Demirel and Parris (2015) in their work find the opposite in the British context. The results of their work are much closer to dominating the link between organizational innovation and access to external funding. These opposing results from different works reinforce our hypothesis that there is a significant link between commercial and organizational innovation with access to external financing for young companies. Thus, we formulate the following hypotheses:

H3: the more young companies specialize in commercial innovations, the more likely they are to access external financing

H4: The more young companies specialize in organizational innovations, the more likely they are to access external financing.

To test these hypotheses, we adopted a methodological approach to achieve the expected objectives.

V. TABLE

In this point, we will briefly present the constitution of the sample and the data collection, the situation of the variables, the econometric specifications and the presentation of the statistical tools for data analysis.

A. Constitution of the sample and data collection

By taking inspiration from the definition of a start-up proposed by Grundei and Talaulicar (2002), Kaoutoing et al (2020), we have in a first phase listed all the small businesses with incubators, Formalities Centers for the creation of companies (CFCE), CATI2-UDS, divisional tax centers (CDI), Chambers of Commerce and the ECAM Employers' Group in August 2018 and March 2020. These are newly created companies or those created there is less than 10 years, which employ six (6) to twenty (20) people and therefore the annual turnover excluding tax is greater than fifteen (15) million CFA francs and does not exceed two hundred and fifty million CFA francs. Once the list was drawn up, we chose the promoters of these start-ups as respondents for the collection of information. Thus, the promoters were approached by telephone and for many by physical contact to take part in the investigation. Data collection took place between January and October 2020 by administering questionnaires from our sample. Out of 196 start-ups solicited, 105 actually responded, i.e. a response rate of 53.57%. This rate seems satisfactory in the context of the study, given the restrictive nature of the sample.

B. Characterization of variables

The characterization of the variables and their measurements are shown in Table 1 below:

Table 1: Characteristics of variables and their measures

Variables		Mesures
Access to external funding	ACCESAUFINEXT	It is the dependent variable, binary taking the value 1 if the company has access to external financing and 0 if not
Product innovation	INNOVPRODUIT	It is a binary variable which the value "1" if the company has undertaken or carried out the product innovation activities and "0" if not.
Process innovation	INNOVPROCEDES	It is a binary variable which the value "1" if the company has undertaken or carried out the process innovation activities and "0" if not.
Business innovation	INNOVCOMMER	It is a binary variable which the value "1" if the company undertook or carried out the business innovation activities and "0" if not.
Organizational innovation	INNOVORGANISA	It is a binary variable which the value "1" if the company has undertaken or carried out organizational innovation activities and "0" if not.

Source: From the Author

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C. Econometric specification

The variables characterized above allowed us to build the following econometric model:

$$\text{ACCESAUFINEXT} = \beta_0 + \sum_{i=1}^n \beta_i X_i + u(1)$$

The full empirical form of the model is:

$$\text{ACCESAUFINEXT} = \beta_0 + \beta_1 \text{INNOVPRODUIT} + \beta_2 \text{INNOVPROCEDES} + \beta_3 \text{INNOVCOMMER} + \beta_4 \text{INNOVORGANISA} + u(2).$$

With:

The data were processed with SPSS software and for this purpose descriptive and explanatory analysis was performed. This is for the explanatory analysis of logistic regression.

VI. RESULTS AND DISCUSSION

We will first present the results of the descriptive analyses and then the results of the explanatory analyses. The descriptive analysis presents the characteristics of the entrepreneur and those of access to external financing (see Table 2).

Table 2: Kruskal-Wallis Comparison Analysis

	<i>Rang means</i>		<i>Khi-2</i>	<i>ddl</i>	<i>Significance of the difference between sub-samples</i>
	<i>No (N=45)</i>	<i>Yes (N=60)</i>			
Product innovation	63,17	45,38	12,529	1	0,000***
Process innovation	65,33	43,75	18,086	1	0,000***
Business innovation	34,83	66,63	37,443	1	0,000***
Organizational innovation	34,83	66,63	37,443	1	0,000***

***, * : significance level of 1%

On reading this table, we observe that product, process, commercial and organizational innovation are key variables in the external financing decision. Two observations emerge. First, the impact of the middle ranks of product innovation, process innovation in non-funded firms is greater than that of funded firms. Their differences are significant at the respective threshold of 1%.

Second, it is observed that the impact of the middle ranks of business innovation and organizational innovation in firms receiving funding is greater than that of firms not receiving external funding. In other words, the majority of companies that have adopted a product and process innovation have not benefited from external funding. This result leads us to believe that growing companies are less likely to access external financing when they decide to innovate in product or process. This can be understandable because the new product or new product may take longer to be accepted by consumers, the same goes for process innovation whose results are still not very tangible.

After presenting the results of the Kruskal-wallis test, we will present those of the chi-square test of independence.

Regarding the chi-square test of independence, Table 3 below shows the link that may exist between the explanatory variables and the explained variable. The purpose of the chi-square test is to estimate the univariate relationships between the explained variable and the explanatory variables. Reading Table 3 allows us to see that there are certain significant relationships between certain explanatory variables and the probability of accessing external financing. The study reveals that the probability of accessing external financing is significantly associated with the 1% threshold with product, process, business and organizational innovation.

Table 3: Chi-square independence test

	Access to external funding		
	Financing decision		
	Khi-2	dl	Sig.
Product Innovation	11,239	1	0,001***
Process innovation	16,574	1	0,000***

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Business Innovation	35,414	1	0,000***
Organisational Innovation	35,596	1	0,000***

***: significance level of 1%

The chi-square test of independence allowed us to study the relationships that may exist between the independent variables and the dependent variable, without specifying the meaning of these relationships.

It is therefore judicious to deepen our results by the logistic regression test which seems to complement the previous test.

Table 4: Estimation of the model parameters by the logit method

Variables	E.S.	Wald	ddl	Sig.
Innovation de produit	16979,859 (-19,460)	0,000	1	0,999
Process innovation	16979,859 (22,590)	0,000	1	0,999
Innovation commerciale	1,295 (-2,391)	3,411	1	0,065*
Organizational innovation	1,283 (-1,049)	0,669	1	0,413
Constante	1,050 (-0,500)	0,227	1	0,634
Value of khi ² =81,477***		P=0,000		-2log-likelihood=61,934
R ² of Cox & Snell=0,540		R ² of Nagelkerke=0,725		

***, **, * : significance level of 10%

On reading this table, one can notice that the variable representing the unspecified factors (constant) is negative and not significant with the probability of benefiting from the financing. Moreover, the chi-square statistic attests that the model is significant at the 1% level. We note that only commercial innovation is significant at the 10% level. According to Nagelkerke's R², we conclude that the variables used in the model explain 72.5% of the access to external funding for innovative start-ups. This result clearly explains the robustness of our model and the choice of study variables.

Business innovation exerts a negative and significant influence at the 10% threshold on access to external financing. This result corroborates the work of Safoulanitou et al (2013) who found that Cameroonian companies are more favourable to commercial innovations to the detriment of other types of innovation, but the authors do not establish any link with access to external financing. However, we validate from the results obtained Hypothesis 1 which states that "the more young companies specialize in commercial innovations, the more likely they are to access external financing".

This may be the reason why our results indicate that there is no significant link between product, process, organizational innovation and access to external funding. These results seem to be contrary to the work of Mina et al. (2013) who found that product and especially process innovations tend to attract external capital compared to other types of innovation. This may be due to different levels of risk aversion inherent in innovation or to the different (perceived) average quality of innovation from country to country. For example, the authors show that US investors reward the signal for potential future returns from innovation activities unlike UK investors. Other variables such as product, process and organizational innovation did not produce statistically significant results.

These results are much closer to Schumpeter's theory of innovation in that the more innovative companies are more likely to access external financing than the less innovative ones and the types of innovation (product, process innovation, commercial and organizational) significantly influences access to external financing. This influence may vary depending on the country.

In summary, we can say that the single hypothesis that was validated allowed us to confirm the influence of innovation on access to finance in the Cameroonian context.

CONCLUSIONS

This article aimed to verify the empirical link that may exist between types of innovation and access to external funding for startups in Cameroon. The use of data collected by questionnaire on a sample of 105 startups in Cameroon, allowed us to

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achieve a number of results. Before arriving at this, some stylized facts were presented beforehand in order to highlight the tests of comparison of kruskal-wallis and of chi-square independence between the variables. The related results show that the different types of innovation (product, process, commercial and organizational) are significantly associated with access to external funding. Like the independence and comparison tests, the results of the econometric estimation provide evidence of a significant effect of business innovation. Access to external financing is significantly linked to business innovation. The results obtained corroborate Schumpeter's theory of innovation.

This empirical evidence advances the literature, because it demonstrates that the degree of information asymmetry that startups face when seeking funding can be reduced through innovative activities. The more Cameroonian startups opt for commercial innovations, the more likely they are to access external funding.

The results of this study are also useful for governments and institutions involved in funding the innovation activities of startups. In other words, it is necessary to develop public investment policies in local startups that we qualify as national champions, to develop Cameroon's Silicon Valley, as is the case with "Station F" in France. This is only possible with the development of crowd funding platforms.

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