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THE EXPLANATORY FACTORS OF INNOVATION IN THE SMES: THE STATE OF QUESTION IN THE FOOD PROCESSING INDUSTRY SECTOR IN CAMEROON; *THEORETICAL AND MANAGERIAL IMPLICATIONS OF THE COMPETITIVE PRESSURE AND THE TRANSFER OF TECHNOLOGY ON THE DECISION TO INNOVATE SMES.*

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ABSTRACT

New policies of investments put innovations at the center of all priorities and notably development policies. Transfer of technology and pressure of competition appear more than never as dynamics and impulsion gears in SMEs (Small and Medium size Enterprise) decision to innovate in the world. Most SME need the means and competences necessary to promote and develop innovations so as to permit their promoters to operate and to master technological progress that is indispensable for development. Technological transfer and the pressure of competition in subsaharian Africa in general and in Cameroon in particular constitute necessary variables capable of justifying innovation of SME : The engagement in technological partnerships. Our article also aims at verifying empirically through an investigation of the relation between competition pressure, transfer of technology, technological partnerships and innovation in Cameroonian SME.

Résumé : Les nouvelles politiques d'investissement placent les innovations au centre de toutes les priorités et notamment dans les politiques de développement. Le transfert de technologie et la pression concurrentielle apparaissent plus que jamais comme des dynamiques et des leviers d'impulsion dans la décision d'innover des PME dans le monde. Les PME ont pour la plupart besoin des moyens et des compétences nécessaires pour promouvoir et développer des innovations afin de permettre à leurs promoteurs d'opérer et de maîtriser les sauts technologiques indispensables pour leur développement. Le transfert technologique et la pression concurrentielle en Afrique subsaharienne en général et au Cameroun en particulier constituent des variables nécessaires pouvant justifier l'innovation dans son ensemble. Pourtant d'autres variables existent pouvant influencer la décision d'innovation dans les PME : l'engagement dans les partenariats technologiques. Aussi, notre article cherche –t-il à vérifier empiriquement par une enquête la relation entre la pression concurrentielle, le transfert de technologie, les partenariats technologiques et l'innovation dans les PME Camerounaises.

Mots-clés : innovation; pme; pression concurrentielle; transfert de technologie; la décision d'innover; partenariats technologiques.

KEYWORDS : innovation; SMEs; competitive pressure; technology transfer; innovation decision; technological partnerships.

INTRODUCTION

« Innovate in order to preserve » It is in this light that Belon (1994) is demonstrating the importance of innovation in an economic context highlighted by Globalisation, Technological advancements, and the uprising of competition among new industrialised countries. We have shifted from the era of mass to personalised consumption resulting to a shortening of products life cycle, (Matinet 2003). Faced with challenges of change, the survival of enterprises is no more definitely acquired hence the necessity for them to opt for the mode of a strategic positioning (Etoundi 2014). Thus, enterprises shall be obliged to constantly put into question the structure of their product portfolio and then innovate. (Tsapi and Gouanglong,2009, Belgiti-Mahut, 2018). Innovation seams then to be like a critical success factor to enterprises wanting to develop and maintain a sustainable competitive advantage (Porter, 1985) particularly in a context of acute competition in global markets, and the fast changing trends of technology and the over abundance of information flow (Brown and Einsenhardt, 1995). As such, the competitively of African SME and particularly the Cameroonian SME is going to rely on the principles highlighted by Bekolo(1999) according to this, SMEs while innovating have to « think globally and act locally). To this effect, the large spectrum of the definition of innovation by Roger (1995) being, 'any practical and or apparently new idea or concept accepted by an individual or an entity' According to this author, to talk of innovation, various criteria must be brought together such as ; having a relative advantage, being compatible to the norms and values under consideration, being applicable by users and finally being measurable before any other general acceptance. At the level of the enterprise, innovation does not only limit at the technological aspect, it also involves the social organization of the job as well as the management system. (Djellal, Faridah, and Faiz Gallouj, 2012) In the Cameroonian context, the innovation under observation is generally minor or incremental. It is recognized under continuity of existence under technological as well as behavioral aspects. It refers to the improvement of products, processes, conditioning of the organization, Commercial and financial methodologies. (Beyina, 2009). Innovation is seen in the Cameroonian market under the Agro alimentary sector for an offer of new products or significantly ameliorated and new in packaging and the promotion of products offered by SMEs. It is the most often new products of the Cameroonian Market. This is why the problem statement of this article is enlightening every evidence on the question of innovation in the SMEs through competitive pressure and transfer of technology, and is summarised in the following way: What are the theoretical and managerial implications of the competitive pressure and the transfer of technology on the decision of innovation by the SMEs? And what strategies can be adopted to influence the decision to innovate in the SMEs and especially in the case of Cameroon? The targeted objective is to demonstrate that other efficient and adaptable measures exist to assist SMEs in their decision to innovate. The Agro alimentary sector is not the only one that is affected by the dynamics of innovation (Richez-Battesti, Nadine, Francesca Patrella, and Delphine Vallade, 2012) Innovation is a global phenomenon touching among others: health, education, agriculture, telecommunications (Touzard, Jean-Marc, et al. 2014). This is to explain the innovation phenomenon in SMEs which we have chosen for the afore mentioned topic and to specify if competitive pressure positively influences or not on the decision to innovate ; as well to verify if the transfer of technology has a positive influence or not on the SMEs decision to innovate, in other terms, it concerns analysing with the help of investigations and analytical measures from statistical data the role of competition and the transfer of technology on the SMEs decision to innovate and to propose another strategy which can assist SMEs in their decision to innovate. In order to respond to the theme in question in the framework of this article, our approach shall expatiate on the following points ; first of all the framework (1) including as substance literature review, Research Methodology, Research Hypothesis, and then, the relationship between competition and technology on the SME decision to innovate (2), the verification of the role of these two determinants on the decision to innovate (3) and finally, the theoretical and managerial implications including substance on technological partnership as a strategy in the decision to innovate.

1-ANALYTICAL FRAMEWORK.

1.1literature review

The context of globalisation in which SMEs are operating requires their capacity to adapt, anticipate, and react. Innovation is therefore

one of the means by which they can survive and remain competitive in an environment that has become much more complex, unstable, and uncertain nowadays, than in the past. In an etymological approach, the word « innovation » comes from latin as « innovatus », meaning, to change or to renew. Following multiple concepts and numerous discussions on the question, two major elements had been noted. To Change signifies to add a new thing and to renew means to improve the status quo. Ait-EL-Hadj (1997), on studying innovation in SMEs it is noted that innovation is »any scientific or technical novelty which has experienced or is experiencing an additional economic value in an enterprise » According to Getz (2002) the innovation phenomenon is perceived in terms of processes et and takes note of the fact that « Innovation is a complex and dynamic process in two stages : generating an invention or coming up with a new and original idea and transforming it into useful production such as a product, a service or a process » These definitions are therefore based on these restrictive authors and focus primarily on technological innovation. Yet innovation can also be about social organization or marketing (Richez-Battesti, 2012). To this wise, innovation is defined in relation to the nature of the induced change. Thus, a change can be described as innovative when it has the effect of responding to market demands or transforming the production structure or process (Rahmouni and Yildizoglu, 2011). As a result of these analyzes, two fundamental aspects emerge from the concept of innovation. The first aspect is but an implicit way, Innovation must be materialised or commercialisable. That distinguishes the concept between innovation and invention which cannot have a practical application (Read, 2000). Invention is the production of a new idea (Bamberger, 1991) of which innovation is the concretisation and the commercialisation of this invention (Gacrcia and Calantone, 2002). The second aspect integrates the dynamic dimension.

In fact, innovation is a result of a more or less organized and interactive learning process that induces the first change, from which other changes are forced to take place (Carrier and Julien 2005). From readings and critics of the preceding literature review, it appears that: Competitive pressure would influence the SME's decision to innovate. This approach corroborates with the tasks carried out by: Jacobse by (1969), Pemukçu and Cincera (2001), Boone (2000), Porter (2005); Julien et al. (2009), Barbaroux,(2016). Similarly, it appears that there is a relationship between the acquisition of new technologies and the decision to innovate. The results of the work of several researchers in favor of this thesis are numerous and in particular the work developed by Freeman (1990), Dahlman et al. (1987), Maillat (1995), Saulais, Pierre, (2016). Conclusively, it would be necessary to focus on the contribution of technological partnerships.

1.2. The methodology of the empirical framework of our study.

The literature examination treating the concept of innovation reveals the absence of a uric definition of the term. Innovation is a wide concept which makes a object of an abundant literature. According to certain authors, (innovation according to novelty), Innovation implies great and fundamental technological changes (radical innovation); according to others, (typology following the nature of innovation), anything that changes whatever is already existing is an innovation, as infirmed as it is (incremental innovation) In this perspective it is convenient to fundamentally take note of the difference between radical innovations and incremental innovations (Freeman and Perez, 1988). Radical innovations constitute discontinuities, technological failures, in the sector of high technological density and principally getting support on scientific advancements, meanwhile incremental innovations are concerned with amelioration (products, and commercial methods)

1.2.1 Definition of SME

The absence of a unique and harmonious definition does not facilitate the identification of SME in Cameroon. However based on the understood criteria of the usual definition of SME and of the possibility to easily reach to related information to these criteria, we have considered SME according to our studies, satisfying units to the following conditions : to be directed by Nationals, to be the property of Nationals ; to have an enrollment of maximum 150 persons ; to have a business capital of 1000 million FRCFA, equivalent to 1 524 490 euros(4). Although not having a framework of a precised sampling responding to the SME agreed profile for our study ; we have been able to obtain lists and annual information of some professional syndicates such as GICAM (Groupement Interpatronal du Cameroon), SYNDUSTRICAM (Syndicat des Industriels du Cameroun), ProPME (Organisme Canadien des PME au Cameroon) pertinent information for the constitution of our sample.

1.2.2. The empirical framework of the study

To answer the question of the proposed research, we have undergone an investigation on Family SME of the town of Douala Cameroon. The investigation is established thanks to a questionnaire administered from a representative sample of this population. The sample of our study constitutes some SME from the Agro alimentary sector of the town of Douala. This choice is justified by the following reasons: Douala town has been cherished because of its metropolitan nature involving the greatest number of enterprises and particularly the greatest number of Agro alimentary SMEs. The Agro alimentary sector has been chosen for our study on innovation because it is the sector that involves the greatest number of industrial SME in Cameroon. (Nkakleu 2003) Also because it is a sector which is opened to competition, permanently offering a variety of products to consumers. To this effect, The Handbook of Oslo recommends that the activities of innovation be measured on a period of 2 to 3 years. But considering the fact that we are in a developing country where innovation is manifested by minor and progressive changes, we have taken the period of five years to account for innovation activities. The exploitation of questionnaires has allowed us to obtain data that we have had to analyse by the help of the following methods; flat sorts for a univaried analysis, logistic regression or logic regression for a hypothetical test. The program of analysis used in order to analyse our data is known as SPSS (Statistical Package for the Social Sciences). Two main reasons justify this choice: first of all, the nature of its accessibility: this is the program which was available at the time of our data analysis; furthermore, the opportunity in this sense that the program of data analysis with which we familiarized ourselves during an exploratory study was concerning the technological partnership. The SMEs that constitute part of our sample are divided as follow:

Table 1 : Division of the initial sample by branch of activity

Branch of Activity	Absolute Value	Relative value
Meat and Fish Industry	2	4
Grainary and fabrication of amylase products	6	12
Cocoa, coffee, tee, and sugar industry	5	10
Oleaginous and animal feed industry	4	8
Fabrication of cereal products	13	26
Fabrication of Milk, fruits, vegetables and other foodstuffs.	10	20
Drinks industry	10	20
Total	50	100

Internal Source

Our investigation concerned 50 SMEs but 44 of them constituted our sample being for the following reasons:

Table 2 : Statistics on feedback from our questionnaires**.**

NATURE OF OUR RESPONSES	ABSOLUTE VALUE	RELATIVE VALUE
Realised contacts	50	100
Our responses related to the close of activities of the enterprise.	02	4

Our responses related to unrespected appointments .	02	4
Our responses related to the reticence of some authorities taking us for spies	02	4
Total number of exploitable questionnaires	44	88

Internal Source

Thus on 50 administered questionnaires 44 have been exploited where a rate of return of 88%. It is then left for us to round up our caneva of research, to discuss aspects concerning research instruments and the choice of tests.

1.2.3. Research hypothesis.

Generally, we are leaving knowledge about the SME decision to innovate. We are enriching this knowledge with that constituted thanks to our exploratory investigations in order to build up a model which some of the relations which are evident must be tested considering collected data from agro alimentary SMEs in Cameroon. Definitively, the hypothetical-deductive approach which we have in this research is justified given that well established knowledge exists on the phenomenon even if they a made in a context that are different from ours. Otherwise, the confirmation or information of hypothesis in the hypothetical-deductive approach can reinforce or modify the preexisting theory. But to test the hypotheses, one should first of all operationalise (6) its constituted variables.

Table 3 : Operationalisation of variables

Hypothesis	Variables of the study	Indicators	Measures	Authors
H1 : *The competitive pressure has a positive influence on the SMEs decision to innovate*	Explicative variable : Competitive pressure	Number of competitors	**1**. A bit numerous **2**.Numerous **3**. Very numerous	Boone (2000) Encaoua (2003) Lelarge (2009)
		The intensity of competition on price and quantity	**1**.Very weak, **2**. Weak, **3**. Average, **4**. High, ***5***. Very High	
	Variable to explain**:** decision to innovate	Fabrication and commercialization of new products, amelioration of existing products, the use of a new technique of production, amelioration of an existing production technique.	**O**. absence of innovation **1**.presence of innovation	Moussavou(2008). Pemukçu et Cincera (2001)
H2 : *The transfer of technology has a positive influence on the SMEs decision to innovate*	Explicative Variable **:** transfert of technology	Purchases of machines intensified in technology.	**0.** No purchases of modern machines. **1.**Purchases of modern machines	Darroch et Mc Naughton(2002), Hendrickx(1996), Pemukçu et Cinsera (2001)
		Acquisition of license, development of correlated conjoint products, Material assistance, technical assistance,	**0.** Absence of partnership contract, **1.** Presence of a partnership contract	
	Variable to explain: decision to innovate.	Fabrication and commercialization of new products, amelioration of an existing product, use of a new technique of production, amelioration of an existing production technique.	**0.** Absence of innovation **1**. presence of innovation	Moussavou(2008), Pemukçu et Cincera (2001)

Internal Source

2. THE RELATIONSHIP BETWEEN COMPETITION AND TECHNOLOGY ON THE DECISION OF SME TO INNOVATE: Results and Implications.

The objective here is aimed at confronting the empirical results to the existing theory. To this effect, the first point shall be about the analysis of feedback from questionnaires and on a descriptive presentation of the results of the investigation. The second point shall be to prove the influence of competitive pressure and the transfer of technology on the SME decision to innovate. It will help to verify our hypothesis from the start and to come out with managerial implications.

2.1. Descriptive presentation on the results of the investigation. (the realities of innovation in agro alimentary SME.)

It is known in all works of research to explain first of all the presentation of the result issued from the descriptive analysis. As well as the descriptive analysis that we realise in this section is limited to **flat sorts.** Results are organised in two sections: Practice of innovation (1) and competition, transfer of technology and identification of SME from the agro alimentary sector. (II).

2.1.1. The practice of innovation in agro alimentary SME

It concerns innovation in companies, typologies of innovation and effects of innovation in companies.

Table 4 : Innovation in SME

OBSERVATION	FREQUENCY	PERCENTAGE	VALID PERCENTAGE	CUMMULATED PERCENTAGE
INNOVATION IN SMEs				
Non observed innovation	15	34,1	34,1	34,1
Observed Innovation	29	65,9	65,9	100,0
Total	44	100,0	100,0	
THE DEGREE OF NOVELTY IN INNOVATIONS				
For the Company	41	93,2	93,2	93,2
For the Market	3	6,8	6,8	100,0
Total	44	100,0	100,0	.
EFFECTS RELATED TO INNOVATION IN SMEs				
Absence of effects	15	34,1	34,1	34,1
Presence of effects	29	*65,9*	*65,9*	100,0
Total	44	100,0	100,0	

Internal Source

Observed Innovation in SMEs : The results indicate that 65.9% of investigated companies are innovating against 34.1% which are not. Concerning non innovating companies, the size factor can be used to justify the absence of innovation. The degree of novelty of innovation; concerning the degree of novelty of innovation, 93.2% of SMEs realise innovations which are new to their companies against 6.8% which realise new innovations for the market.

Results reveal that innovation in SMEs are of incremental nature and relies mostly on ameliorations. These results confirm the weak implications of companies in the activities of Research and Development (R&D). Effects related to innovation in SMEs: Results from our investigations show that 65.9% of SMEs affirm of having effects against 34.1% affirming the contrary. This rate is proportional to the introduction of innovations amidst the companies.

2.1.2. Typology of innovation in SMEs. Competition and techno logy transfer

TABLE 5: Typology of innovation in SMEs

OBSERVATION	FREQUENCY	PERCENTAGE
Product Innovation	**27**	**61,36**
Process Innovation	**23**	**52,27**
Commercial Innovation	**25**	**56,82**
Organisational Innovation	**18**	**40,91**

Internal Source

The above table indicates that 61.36% of investigated companies realise product innovations, 56.8% commercial innovations. This indicates that agro alimentary sector is highly competitive given that the plethory of companies in which they cohabit as well as the massive entry of imported products. This also shows the viability of the sector and confirms the interest that this sector represents for the whole economy. Moreover, these innovations show the enthusiasm of SMEs evolving in the sector to resist competition. A dynamism at the level of the different types of innovations should equally be noted: 61.36% concerns products innovation, 52.27% concerns process innovation, 56.82% for commercial innovation and 40.91 for organisational innovation.

2.2. Competitive Pressure and technology transfer on SME decision to innovate.

This point describes the state of competition and of technology of SME evolving in the agro alimentary sector.

2.2.1. Competition in the Agro alimentary sector.

TABLE 6 : The degree of competition in the agro alimentary sector**.**

OBSERVATION	FREQUENCY	PERCENTAGE	VALID PERCENTAGE	CUMULATED PERCENTAGE
The importance of competition in the sector				
Less Numerous	9	20,5	20,5	20,5
Numerous	22	50,0	50,0	70,5
Very numerous	13	29,5	29,5	100,0
Total	44	100,0	100,0	
Intensity of competition by price				
Very low	5	11,4	11,4	11,4
low	10	22,7	22,7	34,1
Average	2	4,5	4,5	38,6
High	13	29,5	29,5	68,2
Very High	14	31,8	31,8	100,0
Total	44	100,0	100,0	
Intensity of competition by quality.				
Very low	7	15,9	15,9	15,9
low	10	22,7	22,7	38,6
High	17	38,6	38,6	77,3
Very High	10	22,7	22,7	100,0
Total	44	100,0	100,0	

Internal Source

The importance of competition in the sector : Reading through our results, reveals that majority of SMEs that have passed through our investigations, 50% find that competitors are numerous against 20.5% who find that competitors in the sector are less numerous. A relative minority (29.5%) finds the importance of competitors very numerous in the sector. An explanation can be given to that. The agro alimentary sector is very competitive. Investigations also reveals that 31.8% investigated companies find competition on price to be very high. Meanwhile 4.5% of respondents find that competition on prize is average. Finally it can be noted that 38.6% of companies under investigation affirm that competition on product is very high against which 15.9% think that competition on product is very weak. It can be established to this effect that opening customs barriers leads to a powerful inflow of a variety of products into the territory from many other countries. This is what makes local agro alimentary SMEs find it a little difficult.

2.2.2. The transfer of technology in agro alimentary SMEs.

The analysis of the transfer of technology in the SME context relies on two directions: The acquisition of new technologically intensified machines and the engagement of technological partnerships.

TABLE 7 : The acquisition of new technologically intensified machines

OBSERVATION	FREQUENCY	PERCENTAGE	VALLID PERCENTAGE	CUMULATED PERCENTAGE
No	15	34,1	34,1	34,1
Yes	29	65,9	65,9	100,0
Total	44	100,0	100,0	

Internal Source

It can be noted that 65.9% of the companies affirm of having acquired new technologically intensified machines against 15% affirming the contrary. This testifies competition within the agro alimentary sector. In order to follow the technological track and face competition SMEs purchase new machines that are more and more performance so as to produce new products or better still ameliorate existing products.

TABLE 8 : Engagement in technological partnerships

OBSERVATION	FREQUENCY	PERCENTAGE	VALIS PERCENTAGE	CUMULATED PERCENTAGE
No	23	52,3	52,3	52,3
Yes	27	47,7	47,7	100,0
Total	44	100,0	100,0	

Internal Source

Our results indicate that 52.3% of the companies affirm being engaged in technological partnership against 47.7% who are not engaged in such a partnership. This shows that SMEs that have passed through our investigations practice much of open innovation in the sense that that they do not usually have the sufficient means to put in place closed innovation or internally seek the support of partners. This shows also the worries of SMEs of agro alimentary sector to get closer to the technological frontiers of the northern countries in order to stay competitive. Concerning SMEs that are not engaged in the contract of partnership, the size factor can be taken into account. Engagements into technological partnership concerning the agro alimentary sector, necessitates the fact that the company attains a certain size. And in this case, to be limited and having the aim of growing, has to look for expertise and know-how to complete its internal failures and thus stays competitive.

TABLE 9 : Nature of partnership

OBSERVATION	FREQUENCY	PERCENTAGE
Acquisition of license or purchase of certificate	27	61,36
Transfer of competence	18	40,91
Development of conjoint products	6	13,64

Joint Production	5	11,36
Technical Assistance	23	52,27
Material Assistance	3	6,82
Conjoint Research Project	9	20,45

Internal Source

The above table indicates that 61.36% have purchased a certificate against 40.91% that have chosen for the transfer of competence. 20.45% have engages in conjoint research project. It can be noticed that the SMEs' voluntary to acquire technology to offer diversified products as well as of good quality means to constantly stay competitive.

3 – VERIFICATION OF THE ROLE OF COMPETITION AND TECHNOLOGY ON THE SMEs DECISION TO INNOVATE:

Verification of Research Hypothesis

This point aims to invalidate or confirm the assumptions made at the beginning of the research. It is also necessary to apply to the method of analysis used. For our research hypotheses, we use logistic regression. The goal is to explain a categorical variable Y from which the collection of descriptors X = (X1, X2, ...Xj). It is a question of highlighting the existence of a functional link underlying the form Y = f (X, a) between these variables.

3.1. The influence of competitive pressure on SMEs decision to innovate. Our first hypothesis is formulated as follows:

H1 : The competitive pressure may not have a positive influence on SMEs decision to innovate. The effect of competitive pressure on the SME decision to innovate has been measured with help of three variables: the number of competitors, the intensity of competition on price and the intensity of competition on quantity. As such, the model of logistic regression takes the following form:

TABLE 10: The relationship between competitive pressure and the decision to innovate

	Khi-deux	ddl	Signif.
STAGE	16,608	3	0,001
BLOCK	16,608	3	0,001
MODEL	16,608	3	0,001

Internal Source

The model is the result of Khi-deux whose associated significance allows for the conclusion regarding the explicative global capacity of the model. A minor significance to a indicates that at least one of the explicable variables exercises a significant effect on the variable to be explained. The associated value to Khi-deux in the model is 16,608 the limit of the retained significance is 0.05. Confronted with the Khi-deux table, the Khi-deux of the 16.608 model is significant at the level of 0.001. The model is globally significant. One can then accept that at least an independent variable exerts an influence on the dependent variable.

TABLE 11: The meaning of the link between competitive pressure and the decision to innovate**.**

VARIABLES	B	E.S.	Wald	ddl	Signif.	Exp(B)
VAR 004 (number of competitors)	2,799	1,324	4,467	1	0,035	16,424
VAR 005 (the intensity of competition on price)	-1,907	0,670	8,110	1	0,004	0,149
VAR 006 (intensity of competition on quantity)	-0,779	0,372	4,383	1	0,036	0,459
CONSTANT	4,232	1,952	4,702	1	0,030	68,877

Internal Source

The analysis of the regression provides an estimate of the effect of every explicable variable through its coefficient of regression. Every coefficient is compared to 0 to determine the corresponding significance. We are testing the hypothesis that a parameter is equal to 0 against the hypothesis that it is different from 0. It is the Khi-deux of Wald which is used to this effect. The 0 hypothesis is that the coefficient is not different from 0 and the significance must be inferior to conclude the existence of an effect of the correspondent variable. Otherwise, the sign of coefficient provides the direction of the relationship between the explicable variable and the variable to be explained: a positive coefficient indicates a growth relationship (the explicable variable and the variable to be explained vary in the same way), while a negative coefficient indicates a decline (the explicable variable and the variable to be explained vary in the opposite direction from each other). In our model, the different significances for each of the variables are as follow: for the 004 variable (number of competitors), the significance is 0.035; the variable 005 (intensity of competition on price) 0.004 significance; the variable 006 (intensity of competition on quantity) 0.036 significance. Our model therefore reveals that all the estimated coefficients cross the limit of significance (significance: < 0.05). One can then conclude on a significant effect on the variable number of competitors, the intensity of competition on price and the intensity of competition on quantity on the SME decision to innovate. The positive coefficient of the said variables (4.467 – 8.110 – 4.383) indicates as well a growing relationship, which means that this one positively influences the probability that the dependent variable takes the value 1 . In other words, the rise of competitive pressure increases the propensity for SMEs to innovate. Consequently the 0 hypothesis is rejected.

3.2. The influence of technological transfer on SME decision to innovate.

Our second hypothesis is formulated as follows: The transfer of technology to a positive influence on SMEs decision to innovate. The effect of the transfer of technology on SMEs decision to innovate has been measured with the help of two variables: the acquisition of technologically intensified machines and the engagement of SMEs into technological partnerships.

TABLE 12: The relationship between the transfer of technology and the decision to innovate**.**

	Khi-deux	ddl	Signif.
STAGE	35,185	2	0,000
BLOCK	35,185	2	0,000
MODEL	35,185	2	0,000

Internal Source

The model is all about a test of difference of Khi-deux whose associated significance allows for conclusion in relation to the global explicability capacity of the model. An inferior significance to z shows that at least one of the explicable variables exerts a significant effect on the variable to be explained. The associated value to Khi-deux in the model is 35.185. The limit of the retained significance is 0.05. When confronted to the Khi-deux table, the Khi-deux of the model 35.185 is significant to a globally significant level. We can therefore accept that at least it exerts an influence on the dependent variable.

TABLE 13: The significance of the link between the transfer of technology and the decision to innovate of 0.000. The model is a dependent variable**.**

VARIABLES	B	E.S.	Wald	ddl	Signif.	Exp(B)
VAR 011 (acquisition of technologically intensified machines)	12,003	53,527	0,050	1	0,823	163291,668
VAR 013 (engagement into technological partnerships)	1,878	0,750	6,266	1	0,012	6,542
CONSTANT	-10,704	53,56	0,040	1	0,841	0,000

Internal Source

In our model, the different significances for each and every variable

are as follow: for the 011 variable (the acquisition of technologically intensified machines), the significance is 0.823; the 013 variable (engagement into technological partnership), the significance is 0.012. Our model therefore reveals that all the estimated coefficients do not cross the limit or borders of significance (significance > 0.05) concerning the coefficient of the variable; acquisition of technologically intensified machines 0.823 > 0.05. One can therefore conclude to a non-significant effect of the variable on the technologically intensified machines into the technology on the SMEs decision to innovate. Contrary, the variable about the engagement into technological partnerships has a significant effect on SMEs decision to innovate. Furthermore, the positive coefficient of the said variable (6.266) shows as well a growing relationship, it means that this one positively influences the probability that the dependent variable takes the value 1. In other words, the engagement into technological partnerships increases the propensity of SMEs to innovate. Consequently, the 0 hypothesis is rejected.

4. THEORETICAL AND MANAGERIAL IMPLICATIONS OF COMPETITIVE PRESSURE AND OF TECHNOLOGICAL TRANSFER IN THE DECSION-MAKING OF SMALL AND MEDIUM SIZE ENTERPRISES (SMEs)

The Hypothetical-Deductive approach is the approach that we have adopted in our research. This approach supposes the existence of a theory, and the role of the researcher is to verify and enrich the theory, including the necessity to get out implications of theoretical nature. Since our research is carried out in an organisational environment, it is our duty to present implications related to managerial nature. Every point shall represent the analysis of each of our hypothesis from the start. With regards to our regression the relationship between competitive pressure, transfer of technology, and the SMEs decision to innovate.

4.1. Relationship between competitive pressure and decision to innovate by SMEs

Competitive pressure therefore has a positive and significant influence on the SMEs decision to innovate. This shows that when there is competitive pressure, SMEs are more and more incited to innovate. In fact, information flow concerning import activities at the level of product design and product quality leads the local SMEs to do the same, consequently stimulates them to acquire technological capacities which strongly contribute to their future technological evolution. The variables used for representing competitive pressure such as; the numbers of competitors, competitive intensity on price, and the competitive intensity on quantity reflects it well. Thus, among all the three variables it is the intensity of competition on price that is most significant. An explanation can be given to that: The economic globalisation and markets expansion facilitates the penetration of consumer goods into the domestic markets at prices much more lower than those in these domestic markets. This conjuncture to this effect can have a double impact: being to discourage the local SMEs essentially operating in the local markets thereby causing their disappearance from the economic landscape; being to encourage them to double their efforts by putting into place innovations to compete over the imported products. This leads to the amelioration of production processes in order to lower prices. Our works corroborate to this effect to those realised by Jacobs (1969), Pemukçu et Cincera (2001), Boone (2000), Porter (2005) ; Julien et al. (2009).

4.2. The relationship between the transfer of technology and the SMEs decision to innovate.

At this point we are going to explain the relationship between the acquisition of technological information in one hand and on the other hand the engagement into technological partnership on the SMEs decision to innovate.

4.2.1. Positive relationship but not significant to the acquisition of new technologies on the SMEs decision to innovate.

By the theory, the acquisition of new technologies exercises a positive influence on the decision of SMEs to innovate. This theoretical framework is supported by Darroch and Mc Naughton (2002) Moussavou (2008): *The results originating from regression indicates that there is an existence of a positive relationship but not significant between the acquisition of technologically intensified machines and the SMEs decision to innovate. Many explanations can be given:* First of all, the acquisition of technologically intensified machines supposes the presence of a know-how to profoundly absorb the technology offered by the new machine. The presence of skilled labour becomes important in the mastery of the imported production techniques. Nevertheless the salaries of technicians and engineers constitute an obstacle to SMEs in the sense that the highest salary of technicians and engineers can discourage any transfer of skilled labour and consequently brings about a negative impact on firms' decision to innovate. Furthermore as noted by Evenson and Westphal (1995), the relationship between the importations of technology and SMEs' innovating activities is a complex question and notably depends on the techno-economic level of development of the countries in consideration. In fact, the imported investment goods constitute a mode of considerable transfer of technology to developing countries given that they incorporate the latest advancements of technology from western countries. The mastery of these technologies to their average adaptation to local conditions can lead to technological activities in the SMEs. This is about minor innovations. Hence the fact that the acquisition of these technologies exerts negative effects on SMEs decision to innovate is not excluded, leading them not to implement the innovation they would have adopted in the absence of imported technologies. Finally, the technologic boundaries (Gaffard, 2007) within which SMEs operate can constitute a slow down on their decisions to innovate. Also, in this situation the purchases of technologically intensified machines can play a insignificant role on the SMEs decision to innovate. If the SME is situated far from the considered technological boundaries, the acquisition of technologically intensified machines will not have a significant impact on its decision to innovate, given that the distance separating it from the considered technological boundaries is important. In the long run this will constitute a certain laxity in the SMEs decision to innovate. To the contrary, if the SME is situated within the considered technological boundaries or again a considered level of the technological boundaries; the acquisition of new technologically intensified machines would have a positive and significant impact on the SME's decision to innovate. In the specific case of our study, the agro alimentary SMEs in most cases is situated far enough from the technological boundaries dominated by rival firms which are mostly large enterprises. Also, the purchases of technologically intensified equipments are therefore not determinant in their decision to innovate.

4.2.2. Positive and significant relationship of engagement in technological partnership on the SMEs decision to innovate.

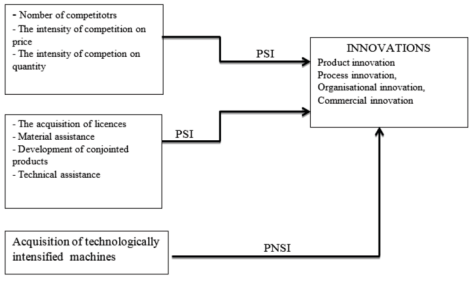
Our model reveals that a positive and significant relationship exists with engagements in technological partnership on SMEs decision to innovate. In other words, engagements in technological partnerships have a positive influence on SMEs decision to innovates. In fact, the contracts of technological partnerships created between foreign firms and domestic SMEs favours technological innovations in the sense that the competence of foreign firms in the subject of technology are effectively mobilised by domestic SMEs. This is proven by the implication of SMEs in the transfer of technology. Furthermore, the majority of SMEs engaged in technological partnerships do this for some very pricised reasons : Most often, with partnerships, they are out to look for what they lack internally. Most often this is all about know-how, technology, material assistance, and distinctive competences. This is in the objective of innovating at the level of domestic SME by proposing an offer which is at least equal to the foreign competition. To arrive at these ends, domestic SMEs acquire exploitation licenses, certificates which imply in most cases the acquisition of new machines, it also allows for the concerned SME to acquire knowledge that it has never had internally before. They get access through this opportunity to codified knowledge and to technical

information contained in certified inventions so as to use them in their research activities and to adapt them into new applications in the market which leads to innovations in the considered SMEs. Our results corroborate to this effect to those carried out by Freeman (1990), Dahlman et al. (1987); Maillat (1995).

CONCLUSION

All along this article, innovation has justified itself to be an important element connected with growth, and a key factor of the success for SMEs that put it into practice. To this effect, SMEs are advised to generate innovations. This research therefore reveals that elements with positive and significant relationship with SMEs decisions to innovate are: the number of competitors, the intensity of competition on price, the intensity of competition on quantity, technological cooperation with other enterprises. In the contrary, the acquisition of technologically intensified machines has a positive influence but not significant on the SMEs decision to innovate. To this effect, the definite model of research can be presented as follows:

Figure 1 : The final research model.



PSI: Positive and significant Influence.
PNSI : Positive and non significant Influence ;
Source : By our Inspiration

Finally, making a point on the sector of the study was necessary to present the methodological approach followed. This methodological approach allowed us to reach out to some results. These results reveal that there is a correlation between our explicable variables and variables to be explained. In other words, the explicable variables such as the competitive pressure and the engagements in technological partnerships have a positive influence on the SMEs decision to innovate, whereas, the acquisition of technologically intensified machines have a non significant influence. These results have also helped us to validate our first hypothesis: the competitive pressure has a positive influence on the SMEs decision to innovate. Concerning our second hypothesis, the transfer of technology as an influence on SMEs decision to innovate is partially validated. As a result a definite model of research has been elaborated.

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