Product Innovation in Algerian SMEs: What Impact on Competitive Advantage?

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Abstract:

The present research aims to provide insight into the role of new innovation-based products in developing the competitive advantage that today is viewed as highly required for Algerian companies. For the purpose of meeting this objective, a quantitative study was carried out by means a questionnaire that was distributed to small and medium-sized industrial enterprises (SMEs) in Algeria. This study focuses on analyzing the responses of the decision-makers of these SMEs (Marketing Manager, Manager and Owner). The findings indicated that product innovation can positively affect the launch of a new product, and has an affirmative impact on competitive advantage. This suggests that it is essential today to promote the culture and concept of innovation among managers of Algerian companies.

Keywords: Innovation; new product launch; competitive advantage; Algerian SME**.**

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1. INTRODUCTION

Currently, product innovation appears to be a promising avenue for companies to ensure their survival and growth (Dorson, 2018). It is widely acknowledged that marketing capacities are the key to any company in order to produce competitive advantage, by creating the low cost and differentiation advantages, and so that organization's products be better known than its competitors' ones (Porter, 1998; Boladj, 2003). It should be mentioned that the launch of new products on the basis of innovation is considered as one of the most important strategic options that aims to *strengthen the company's* long-term *competitive* position, as it is considered a privileged source of development for companies; its importance becomes clearer by introducing new products in the market, thus making it possible to achieve a certain superiority over its competitors (Barney, 1991). As a result, today's businesses ought to innovate more, faster, better, and at lower cost, at the risk of becoming outdated, or even trapped in traditional products and business models. For example, the bankruptcy of Kodak and the acquisition of Nokia left deep impact on people's minds, showing that no giant company is immune. On the other hand, GAFA (Google, Apple, Facebook and Amazon) deserve to be cited as models of success in all sectors. It may consequently be asserted that any business should seek to create a competitive advantage and adopt an effective marketing strategy. Indeed, this research focuses mainly on the contribution of new products launched by SMEs in Algeria in achieving competitive advantages.

It is widely admitted that in general, the general features of the economic system in different developing countries do not allow assimilating a model of growth and development as it is established and practiced in developed countries. Furthermore, it must be recognized that the path to innovation is an option that does not need to be confirmed. Indeed, innovation is highly rewarding and represents a source of significant progress and success for Algerian companies (Haddad H, 2017). It is worth recalling that the issue of product innovation in the Algerian context is quite recent and is very difficult to understand. This is mainly attributed, on the one hand, to the fact that, so far, few empirical studies have been carried out in this direction, which is

confirmed by the limited number of publications on the subject, and on the other hand, to the lack of data and statistics concerning the innovation system adopted by the State towards companies in order to support investment linked to the development and enhancement of innovation (Haddad H, 2017). However, the main issue of this research can revolve around the following question: "***Does the launch of a new product contribute to the acquisition of a competitive advantage for Algerian industrial SMEs?***"

The primary purpose of this research is to try to explain the launch of new products as a source of competitive advantage, since the survival and sustainability of the company in the market depends on it. The methodological approach adopted in this work begins with a review of the literature followed by an empirical study.

2. LITERATURE REVIEW

2.1. Relationship between product innovation and launching a new offer

Nowadays, a lot of people are in broad agreement on the fact that companies must offer new products to markets that would eventually become an integral part of future lifestyles (Lenfle, 2001; Huang, 2010; Higon, 2011). Furthermore, the very success and survival of companies depend on their capacity to innovate; however, no one denies that this is an arduous and risky task. Indeed, many businesses have failed in the face of the difficulty of constant innovation, often due to the inability to manage the innovation process (Eshlaghy, 2011). Consequently, and through the abundant literature in management sciences, several authors insist on the central role that new product development must play in the performance of companies; these same authors are also interested in the issue of innovation management (Wingwon, 2012) It is widely admitted that innovation is an important element of management; it is directly linked to the performance of the company, as suggested by (Weerawardena, 2003). In addition, innovation could be recognized as a key success factor in an increasingly competitive global economy. In addition, it was revealed that the economic development is enhanced by innovation practices and contributes to the expansion of new markets and the advancement of existing operational markets. It may consequently be asserted that, for the company, innovation is the best strategy

to adopt for its defense and its security. For this, to assess the impact of innovation on launching a new product, it was considered interesting to consider the following hypothesis:

H1: Product innovation in Algerian SMEs has a positive effect on the launch of a new product

2.2. The relationship between an innovative product and competitive advantage

Innovation is generally seen as an essential element of competitive advantage that is established in the company structure, in the activities of the production process, in launching a new product, as well as in the marketing strategies of the company (Wingwon, 2012).

The primary function of innovation in business is to strengthen competitiveness, evade competition, gain monopoly and improve profitability. The company must have a competitive advantage in terms of price and quality; it ought to make investments in innovation. Research conducted by (Eshlaghy, 2011) confirmed the important role that innovation can play in improving business performance. The company's role in responding to the bumpy economic environment requires innovation which, on its own, holds a central position in the move towards competitive advantage and in the direction of the highest performance.

In this context(Haddad H, 2017), conducted a study that attempted to measure the success of product innovation and determine the factors leading these innovations to commercial success in Algerian SMEs. The findings revealed the significant impact of product innovation on the company's sales and profits. In light of the above, the following hypothesis was proposed:

H2: Product innovation has a positive effect on the competitive advantages of Algerian SMEs

2.3. The relationship between the launch of a new offer and competitive advantage

(Huang, 2010) developed three conceptual dimensions that allowed measuring the performance of companies. These three dimensions are business competition, manufacturing performance and process efficiency. Business competition covers profitability, sales growth, the total cost of quality, and the company's ability to offer a new product. Manufacturing performance is focused on the average production machine utilization, production cycle time, operational cost, and internal and external customer satisfaction. Finally, the efficiency process depends on whether or not the company has achieved efficiency and effectiveness in its operational process. Therefore, it should be asserted that launching a new offer is proof of production and marketing capacity. The question then is whether the launch of a new product may well contribute to the realization of a competitive advantage. Hypothesis H3 can then be formulated as follows:

H3: The launch of a new offer gives the Algerian SME a competitive advantage.

Based on previous studies and on the literature review, the following empirical research model was developed:

Figure No 1 : The Conceptual Model
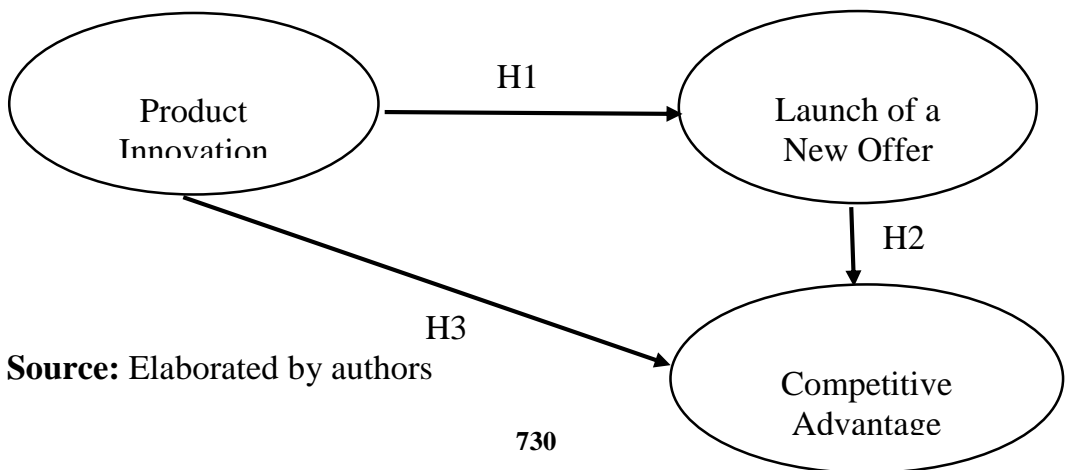
Source: Elaborated by authors
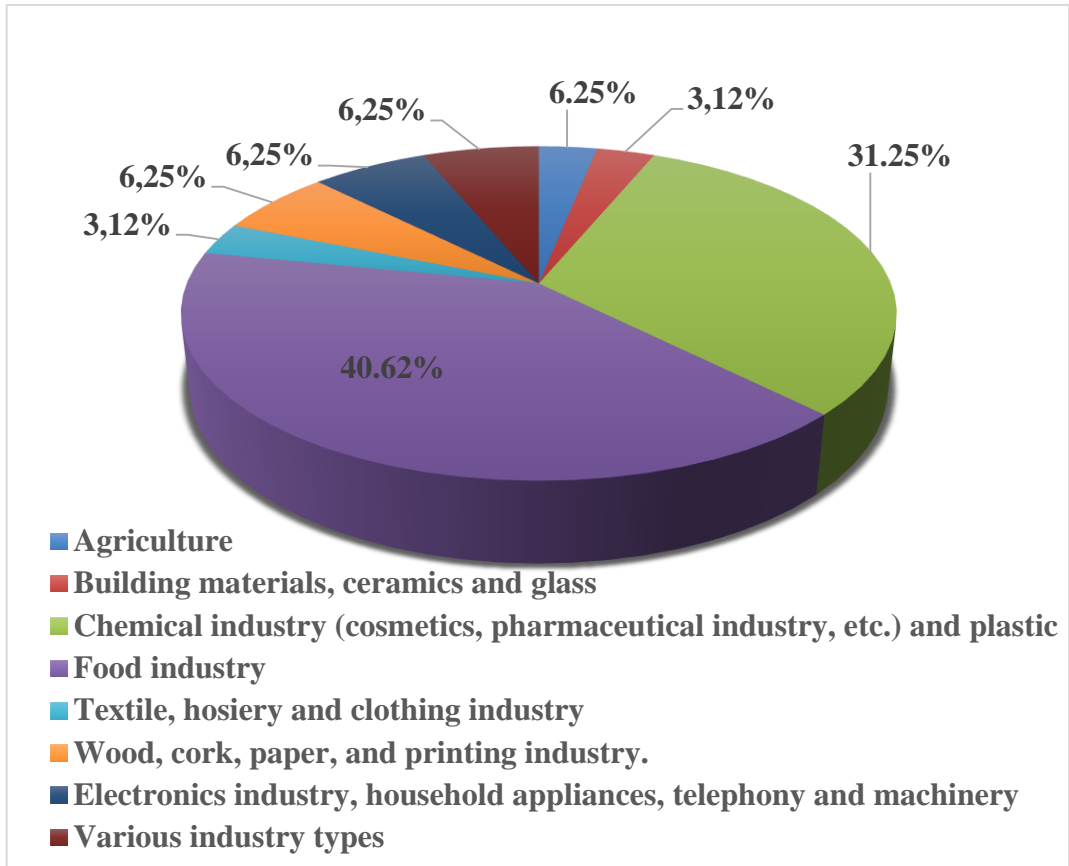
3. EMPIRICAL STUDY

3.1. Sample determination

The present study focused on Algerian SMEs which in this case constitute the mother population under study. The research sample is composed of Algerian industrial SMEs. This choice is justified by the activities carried out in these companies; these activities favor the emergence of a competitive game, and are supposed to detain a significant potential for innovation. For this reason, it would be interesting to ask company managers (head of marketing department, product manager, company manager, etc.) to express their personal opinions about launching of a new product. It must be recognized that this action remains relatively difficult to accomplish due to the limited possibilities of contacting all the companies. Therefore, the sample considered in this study includes 32 companies (Figure2), located in sixteen (16) different Wilayas, and dispersed throughout the country.

The distribution figure N°2 of business areas shows that the response rate varies from one sector to another. The food industry is in fact the most dominant, with a response rate of 40.62%, followed by the chemical industry with 31.25%. The other industrial fields all exhibit nearly the same levels of response rates; they around 6.25% for agriculture and the ceramic and textile industries. The other sectors show a rate of 3.12%.

The majority of SMEs contacted, approximately 59.37%, were created from the year 2010, and 12.5% of them between 2000 and 2010, following the promulgation of the orientation law on the promotion of SMEs (Law n° 01/18 of 12/12/2001) and the ordinance on investment development (Ordinance n° 01/03 of 20/08/2001). The rest of businesses were created before the 2000s and are mostly considered family businesses.

Figure No 02: Distribution of companies according to their main activity (field of activity)

Source: Elaborated by authors using SPSS version23 software (N=32).

3.2. Results and discussions

3.2.1. Empirical data reliability tests

With regard to the three constructs considered in this study, it should be noted that it is necessary to measure the internal reliability of each construct as well as the number of its different elements. To test this internal reliability, the Cronbach's alphas are then calculated for the elements designed for the same concept. If the elements are multidimensional, then the Cronbach's alpha coefficient is generally low, and in this case it becomes possible to use either factor analysis or the element correlation matrix to select a subset of elements that tend to be one-dimensional.

Table No 01 : Cronbach's alpha for the variables

Variables	Cronbach's alpha	Number of items
Product innovation	0.791	4
Launching a new offer	0.848	6
Competitive advantage	0.808	4

Source : Survey results using SPSS version 23 software (N=32)

It is worth noting that the value of the coefficient is greater than 0.791, which is considered as excellent because this value exceeds the required minimum threshold of **0.70** (Nunnally, 1978). Although this is an arbitrary tag, it is nonetheless widely accepted by the scientific community. It can therefore be said that, for this scale of fourteen items, the internal consistency obtained is quite satisfactory.

3.2.2. Correlation analysis

After checking the reliability of the items, it is required to take the average of the item scores for each construct as the final score on which further analysis is performed. Table 2 summarizes the means and standard deviations for all concepts. All three constructs have scale averages that fall within the half of the center scale. Two constructs are negatively inclined; non-normality could be a sign of cross-correlation.

Table No 02: Summary of descriptive statistics of variables

Variables	Mean	Standard deviation	Skewness*
Product innovation (PI)	3.4785	.60812	.057
Lauching a new product (LP)	3.6535	.69102	-.149
Competitive advantage (CA)	3.5396	.60491	.135
Note : * Standard error of skewness : 0.240			

Source: Survey results using SPSS version 23 software (N=32).

Table No 03: Pearson's correlations between constructs

	P1	**LP**	**CA**
PI	1	.594 (**)	.444 (**)
LP	.594 (**)	1	.392 (**)
CA	.444 (**)	.392 (**)	1
Note: **The correlation is significant at 0.01			

Source: Survey results using SPSS version 23 software (N=32).

Preliminary tests of the hypotheses were implicitly performed based on the correlation matrix given in Table 3. All variables are positively correlated with each other at the 0.01 level. Correlations linking the other pairs were estimated to be at least 0.392, and can be as high as 0.594. It should be noted that pairwise correlations give a rough idea of the relationships between these different factors. In addition, to study the structure of the hypotheses in a more sophisticated way, it was deemed interesting to fit the corresponding linear (multivariate) models, while taking into account the effects of the other constructs.

3.3. Testing the hypothesis model

Since the three hypotheses must be verified, the estimation of the parameters was carried out as follows:

Table No 04: Bartlett's sphericity test

Probability ratio	.842
Chi-square approximation	.323
Df	3
Sig.	.051
Note: The null hypothesis testing indicates that the residual covariance matrix is proportional to an identity matrix	

Source: Survey results using SPSS version 23 software (N=32).

Close examination of this table shows that the Bartlett's sphericity test is significant. It is worth noting that when this test is significant, it can be asserted that our data come from a sample for which the matrix is an identity matrix (the correlations are not equal to zero). Therefore, a more in-depth analysis is tolerated, and the analysis could be continued.

Table No 05 : Parameter estimates

Variable	Parameter	B	Standard Error	T	Sig.
Product innovation	**Launching a new offer**	.515	.275	1.874	.064
	Competitive advantage	.397	.087	4.568	.022
Launching a new offer	**Product innovation**	.506	.281	1.800	.075
	Competitive advantage	.415	.070	5.915	.012
Competitive advantage	**Launching a new offer**	2.120	.448	4.733	.085
	Product innovation	.210	.121	1.735	.086

Source: Survey results using SPSS version 23 software (N=32).

The standard deviation (SD) values reflect the variability of the coefficients in the sample. The standard deviation (SD) value allows carrying out the t-test (t-value), which helps to know whether this coefficient is significant or not. The parameter estimation table (Table 5) may be used to check whether each model is significant. Note also that the smaller the value of P, the higher the t-value and the more the variables contribute to the model. Therefore, based on the above findings, it can be deduced that the three variables are statically significant.

Table No 06: Tests of the effects between subjects for the model

Source	Variable	Type III Sum of Squares	Mean square	F	Sig.
	Product innovation	21.287 a	5.322	33.382	.000
Corrected model	**Launching a new offer**	27.615 b	6.904	41.390	.000
	Competitive advantage	7.725 c	1.931	4.554	.002
Note : a) $R^2 = 0.582$ (Adjusted $R^2 = 0.564$), b) $R^2 = 0.633$ (Adjusted $R^2 = 0.618$);c) $R^2 = 0.159$ (Adjusted $R^2 = 0.124$)					

**Source:** Survey results using SPSS version 23 software (N=32).

The significance of R^2 is evaluated according to the contribution of each step. Close examination of this table indicates that this model explains a significant proportion of the variance of the variables. Indeed, the value of R^2 went down from 0.582 to 0.564, while in the second model, R^2 went down from 0.633 to 0.618; this variation is relatively significant when the regression model in considered. The values obtained suggest that the data from this research fit the model very well. Note that the value of F is calculated from the variation of R^2 between steps. The SPSS software package allows checking whether the differences between the R^2 of model 2 and those of model 1 and model 3 are significant. This value was found equal to 33.382, 41.390 and 4.554 for the three models 1, 2, and 3, with significance values of 0.000, 0.000 and 0.002, respectively; they are all less than 0.05. This allows concluding that the relationship between the variables is statically significant, which confirms our research hypotheses.

Based on Tables 3 and 6, it is clearly seen that the launch of a new offer and product innovation have positive effects on competitive advantage. More importantly, these three variables seem to be well correlated with each other. Positive correlations between variables are also confirmed by the data.

Hypotheses	Results
H1 : Product innovation affects positively the launching of a new offer in Algerian SMEs	**Confirmed**
H2 : Product innovation has a positive effect on the competitive advantages of Algerian SMEs	**Confirmed**
H3 : The launch of a new product provides Algerian SMEs with a competitive advantage	**Confirmed**

Source: Elaborated by authors

Figure No 3 : Structurel Model Results
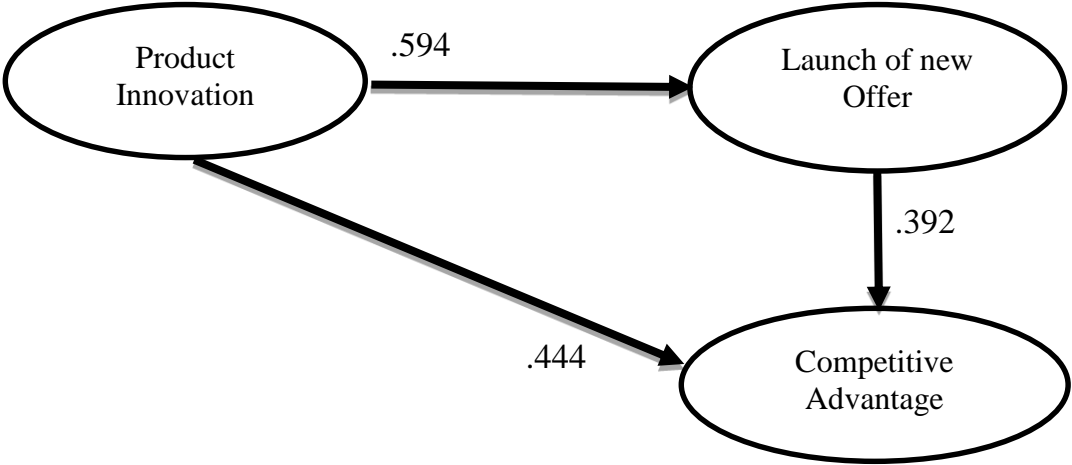
Source: Elaborated by authors

4. CONCLUSION

Launching a new product is an operation of great importance in Algerian companies. It is a challenge that the company must continually meet as it represents the essential lever for its sustainability; this may be done through the creation of sustainable competitive advantage. The results of this research show that the companies under study adopted the strategy of launching new products because this allowed them to get ahead of their competitors. The findings in this study helped us to elucidate and understand that the operation of launching a new product is the result of a series of relevant choices adopted during all stages of the project. Indeed, it is first necessary to launch the search for a new product, to ascertain whether it is an entirely novel product or the improvement of an existing one, then to identify the right concept to find markets for this new product. Furthermore, it is imperative to refocus on the company's challenges for the purpose of checking the suitability between the project of launching a new product and the skills and resources available to the company.

In addition, launching new products is today seen as an elaborate and systematic plan of action that the company must carefully conduct in order to survive in a constantly evolving environment. It is worth specifying that it is not a matter of attracting new customers, but rather of retaining them. In addition, the competitive advantage of a company is an essential element that ensures its superiority over other competitors.

It is widely acknowledged that a company cannot acquire a competitive advantage only by offering a different product with a lower cost; it should also go beyond the need to optimize its resources (tangible, intangible and skills) in order to design and implement new competitive strategies.

The results obtained in this research paper allowed highlighting the effects of product innovation on the launch of a new offer and on acquiring a competitive advantage. Therefore, it is strongly recommended to pay special attention to these factors.

Research paths

This research opens the way to a number of avenues of research. Therefore, it would be quite interesting to:

- Develop a more complete model that allows integrating the internal characteristics of SMEs, namely flexibility, learning capacities and degree of creativity. However, it must be recognized that several challenges in terms of identifying the products to be launched and setting up an effective marketing strategy remain to be overcome. It should be noted that the success of product innovation and new product launches depends on several factors.

- Identify the factors that hinder the adoption of innovation in Algerian companies. The success of a new product certainly depends on the adoption of an appropriate and well-studied strategy; however, in a constantly changing environment, one cannot speculate on the future situation as failure can occur at any time and the factors mentioned above can represent difficult obstacles for managers to overcome. The operation of launching a new product with all its stages has already been discussed; nevertheless, important elements that may go unnoticed can lead to failure. It is therefore a matter of identifying them beforehand in order to avoid them, and also to ensure that the situation is beneficial to the company in order to go from an inevitable failure to a fascinating success.

Furthermore, this study allowed identifying and providing managerial implications. The results obtained helped to highlight the fundamental role of product innovation in the commercial success of the company. This should encourage business leaders and managers to adopt the process innovation strategy in the production and marketing cycles of their companies. In this regard (Le Masson P., 2006)indicated that "*Innovation is the great contemporary issue! Better yet, it might be the only one possible.*"

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