

The impact of intellectual capital on the competitive development of pharmaceutical firms in Algeria

أثر رأس المال الفكري على التطور التنافسي لشركات الأدوية في الجزائر

LAKHDAR Houaria Ibtissem¹

¹ University of Oran 2 Mohamed Ben Ahmed, Algéria, lakhdar.houaria.ibtissem@gmail.com

Received: 25/11/2023

Accepted: 11/02/2024

Abstract :

The search for competitiveness is the main objective of any company. And in order to achieve a dominant position in the market, the latter resort to various material and immaterial means. The objective of this study is to demonstrate the importance of intellectual capital in the Algerian economy, and more precisely its impact on the performance of pharmaceutical companies.

Keywords : Intellectual capital, competitivedevelopment, competitiveness, pharmaceuticalindustry.

Jel Classification Codes : O34, D41, L65.

ملخص:

البحث عن القدرة التنافسية هو الهدف الرئيسي لأي شركة. ومن أجل تحقيق مركز مهيمن في السوق، تلجأ الأخيرة إلى مختلف الوسائل المادية وغير المادية. تهدف هذه الدراسة إلى بيان أهمية رأس المال الفكري في الاقتصاد الجزائري، وبشكل أدق تأثيره على أداء شركات الأدوية.

كلمات مفتاحية: رأس المال الفكري، التنمية التنافسية، القدرة التنافسية، صناعة الأدوية.

تصنيف JEL: O34, D41, L65.

¹ Corresponding author: LAKHDAR Houaria Ibtissem, lakhdar.houaria.ibtissem@gmail.com.

Introduction

For a long time, the economic development of countries was based mainly on tangible goods (natural resources, human resources, equipment, capital, production...). Today, wealth has become immaterial. Based on innovation and the ability to create new concepts and ideas, and master new technologies, product quality, reputation, brand image, ... This is summed up in one word by Intangible Capital, which represents one of the most important sources of competitive development and creation of comparative advantage (Drucker, 1993; Grant, 1996). The competitive development of a company represents the only means of survival and existence of the latter. The global competitiveness of pharmaceutical companies, unlike other sectors, is mainly focused on R&D and their ability to develop new products and acquire patents. The latter will allow them to have a monopoly over a certain period of time. In Algeria, the equation is changing. The national pharmaceutical policy is oriented mainly on the promotion of local production which means the generic. In this case, the competitive development of firms can be focused on several criteria: product quality, prices, availability, promotion, brand image, etc.

This work will reveal the results of our exploratory qualitative study based on the comparison of nine (09) cases of national and international pharmaceutical companies. From this we have tried to understand in depth our research object which is located around the following problem: How can intellectual capital make a company more efficient than its rivals?

The objective of this study is to demonstrate the influence of intellectual capital on the performance and competitive development of pharmaceutical companies in Algeria based on the three components of intellectual capital namely human capital, organizational, and relational.

Study methodology: To achieve our goal we opted for an exploratory qualitative study based on the comparison of nine (09) cases of national and international pharmaceutical companies.

1. The concept of Intellectual Capital:

Despite the multiple definitions given to the concept "intangible capital", it is difficult to agree on a commonly adopted definition or typology because the latter represents a relatively new concept that is still in its development phase (Mehralian, and al., 2012).

It represents the alliance of intangible assets of the market (Brooking, 1996). Which can be knowledge, practical experience, organizational technology, customer relationships and professional skills that provide a competitive advantage in the market (Mhedhbi, 2010).

Intellectual capital is a broad concept that includes the multiple knowledge and knowledge in the company.

However, despite the difficulties of conceptualization and definition, the ideas of the majority of authors converge towards the same classification which subdivides intellectual capital into human capital, structural capital and relational capital (Sardo & Serrasqueiro, 2018) and (Smriti & Das, 2018).

2. The components of intellectual capital:

The three components of intellectual capital are as follows:

2.1 Human capital:

Is the component that has the most weight among the other components of intangible capital. It represents the work force that comes from the ability to think and innovate as well as the ability of employees to carry out the missions and activities of the company, its values, its culture and its philosophy (Edvinsson & Malone, 1997). Abeysekra (2008) defines human capital as the skills acquired by employees and which can lead the company to improve and increase its value creation capacity. It brings together knowledge, skills, professional experience, intelligence, know-how, capacity for innovation, creativity, way of working, motivation, satisfaction, flexibility of employees, loyalty of employees, educational level and learning capacity (GIGREF, 2006). This component of intellectual capital brings together any contribution that comes from mental effort on the part of men.

2.2 Structural capital:

Also called "Organizational Capital". It represents non-human intangible assets owned by the company such as:

- intellectual property which includes all exclusive rights granted to intellectual creations such as: patents, trade secrets, trade marks, etc.;
- infrastructural assets which represent all intangible assets contributing to the proper functioning of the organization's activities such as: information systems, processes, databases, software, etc.;
- the internal organization which designates the internal regulations, the climate and the mode of operation of the firm. We can cite: the values, the company culture, the management philosophy, the quality of social relations in the company..., as well as the manuals, quality control standards...

2.3 Relational capital:

Brings together all the links that connect the firm to its external environment (GIGREF, 2006). These include relationships with customers, suppliers, business partners, shareholders, investors, financial entities and government.

Relational capital represents the integrated knowledge of customer and supplier preferences and relationships with partners (Yitmen, 2014).

Since the three components of intangible capital are often combined in organizations. Their relationships strongly participate in the solidification or transformation of existing knowledge in order to gradually influence the innovative capacities of employees (Lounissa&Fortas, 2021).

3. The results of the study:

The success of a company and the acquisition of a strategic positioning in its sector can be the result of several factors: the quality of the products or services offered, the prices of the latter, the image reflected by the brand, the mastery new technology, innovation, human capital, good internal organization, better sales and marketing strategy, competent staff, etc.

In order to understand the impact of intellectual capital on the competitiveness of companies, we conducted a study with nine national and foreign industrial, pharmaceutical laboratories of different sizes and locations.

Of the nine (09) companies participating in our study, six (06) national laboratories all began their activities within the pharmaceutical sector by importing drugs, then moved on to primary and secondary packaging to be able to reach the stage of the production. It is a sequence described as logical given the multiple and consecutive instructions taken to promote national production and favor local production.

Furthermore, more than three-quarters of the laboratories involved in our study are considered large companies. Since they exceed the threshold of 250 employees, however, two thirds of them are located in the center of the country (Algiers and surrounding areas).

3.1 Activities of participating companies:

Unlike other sectors, the pharmaceutical industry encompasses some any different categories of products, which it gives pharmaceutical companies the opportunity to operate in different segments. The majority of companies participating in our study are industrial companies that manufacture their own product lines in different segments, mainly generics, originators and OTC.

We have noticed that there are among the nine (09) participating laboratories some which bring together a set of activities such as distribution, medical promotion, import, manufacturing, export, etc. All these activities are directly related to the pharmaceutical field. However, none of the nine (09) cases operate in non-pharmaceutical segments (other sectors of activity).

In addition, a significant share imports a significant quantity of products from abroad. Without forgetting a case which subtracts with another laboratory for the production of these products in Algeria.

On the other hand, despite the fact that all of the companies studied in our study manufacture medicines, production activity does not represent the main activity for all. For some laboratories, it comes second after distribution.

3.2 The market for which the products of the participating laboratories are intended:

Despite the fact that the Algerian pharmaceutical market is a very large market characterized by its strong growth, the ambition and desire for development of companies continues to progress. Several private national pharmaceutical laboratories have taken the step of exporting to other African countries. Of the nine (09) cases of the study, we can count two laboratories which export their products to African countries.

3.3 The impact of intellectual capital on the competitive development of pharmaceutical firms in Algeria:

In order to understand the impact of intangible capital on the competitiveness of pharmaceutical companies in Algeria, our study was mainly based on two components. The first represents the presence of the three components of the latter within the company. Furthermore, it is necessary to know which of the three has the greatest weight in the development of the firm.

3.3.1 The use of human capital within the companies in the study:

All of the companies in the study attach great importance to human capital, and believe that it plays a significant role in their development and competitiveness.

Which pushes them to focus on recruiting and retaining professional and creative employees.

The results of the interviews allowed us to extract the following data:

Concerning employee knowledge: almost two thirds of the responses affirm that the employees of their companies have very significant knowledge in the pharmaceutical field while a third think that they have an average level in this area.

In relation to their skills, professional experience and know-how, all of the companies interviewed affirm that they have competent, experienced employees on their premises who master their work. It seems important to us to mention that in the pharmaceutical industry real competence and know-how appear in the company's ability to find new molecules and create new drugs. On the other hand, strength in R&D is not the only skill that can give the company an advantage over the competition; the skills of the commercial department and especially the sales force have a strong impact on the development of the firms in that it can boost the sale of its products.

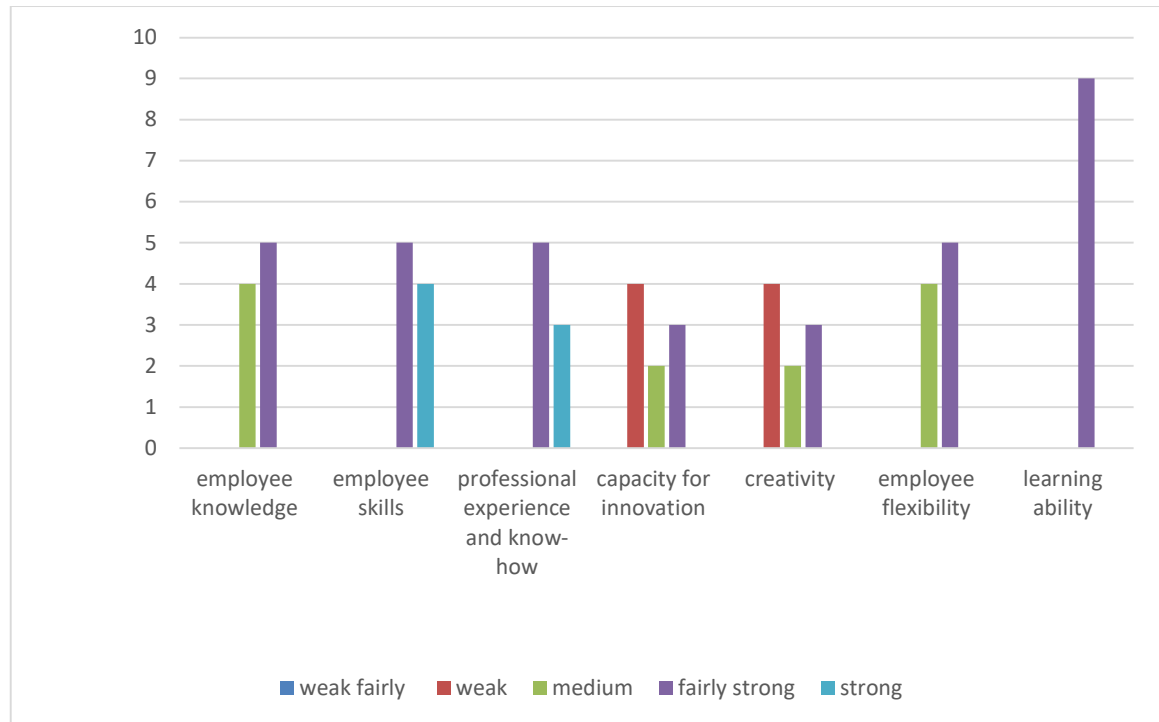
Regarding the capacity for innovation and creativity, the data extracted from the responses are diverse. For a third of respondents, their employees have a high capacity for innovation and creativity. These answers relate to international firms established locally. The other results affirm that this type of capacity has a fairly low to medium level due to the fact that local laboratories do not carry out any R&D, they only reproduce original drugs which have fallen into the public domain.

The data extracted on the penultimate criterion of our questions relating to human capital demonstrated that the employees of almost two thirds of companies have a fairly high level of flexibility. This response is explained by the large product portfolio of these companies.

In relation to learning capacity, all firms believe that employees have a strong capacity in this area. Because companies encourage and push employees to learn and develop in the

field. Despite the fact that as we have already mentioned, the pharmaceutical industry in Algeria has not yet crossed the originator threshold. All local laboratories manufacture generic drugs, those of foreigners only do primary and secondary packaging locally (see Fig. 1).

Fig. 1: human capital within the companies in the study.



Our survey demonstrated that in terms of employee knowledge and skills, pharmaceutical companies have employees with a high level of mastery and professionalism. A characteristic that must be highly sought after by this type of company given the quality and sensitivity of the products they offer. On the other hand, we have noted that pharmaceutical companies in Algeria are interested in recruiting and preserving qualified personnel, and attach great importance to the sales force, thinking that it represents one of the best sources of advantage competitive.

3.3.2 The use of organizational capital:

With the era of globalization and new information and communication technologies, any company must adopt an organization equipped with all the tools allowing it to align with global development.

The nine companies in our study claim to have used organizational capital within these premises in order to facilitate tasks, to use a smaller number of employees and also to have a climate favorable to them. On the other hand, they believe that the adoption of organizational capital allows the company to organize itself, develop and gain more market share.

In terms of organizational capital, the results of the survey allowed us to extract the following data:

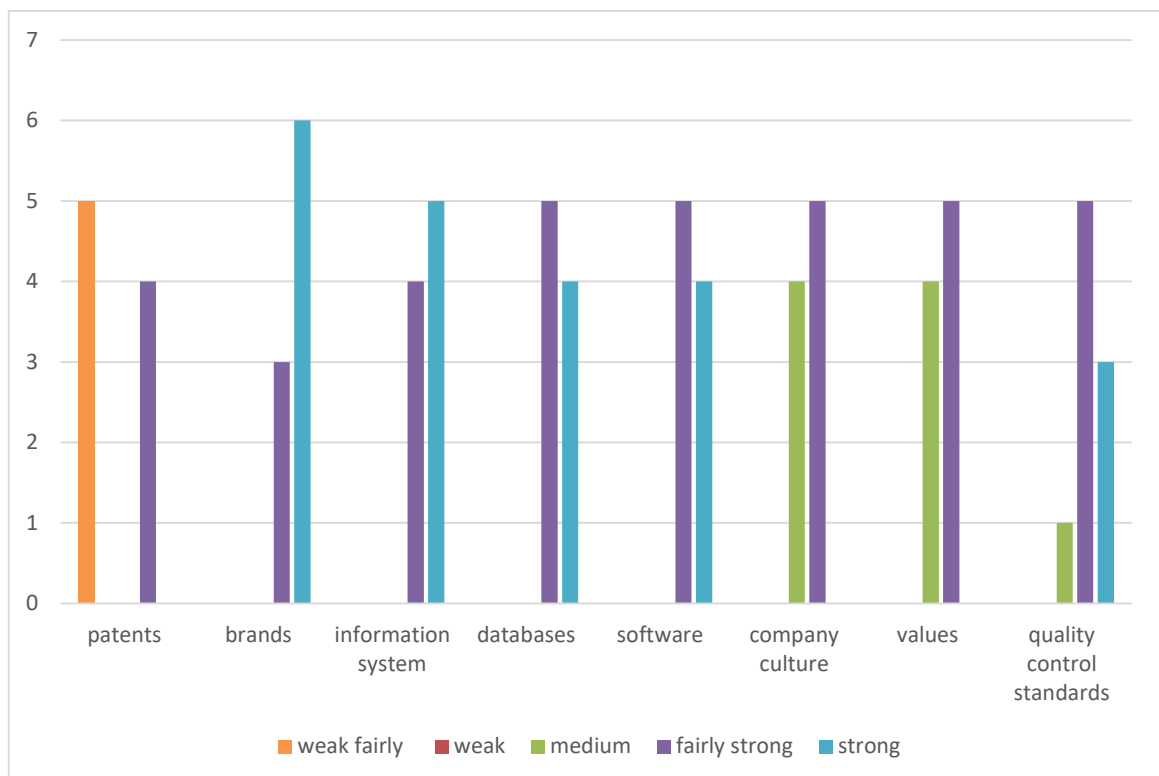
Concerning the acquisition of patents by the companies in the study, the results demonstrated that these are acquired only by international firms established locally. Results which seem to be logical given that all national companies manufacture either generics or originators under licensing contracts.

In relation to product brands, the implementation and reliability of the information system, databases and software, all respondents claim to have succeeded in creating memorable brands for customers and installing reliable and useful systems, data bases and software.

The results thus demonstrated that the companies in the study have cultures and values specific to each of them and which reflect their internal organization and functioning. However, the importance of these two points remains relative in our companies questioned. For almost two thirds of respondents, culture and values are very important points in companies and on which they pay great attention.

Concerning the last point relating to quality control standards, the majority of respondents claim to have put these in place and to be very strong in the matter (see Fig. 2). Results which can be justified by the fact that the pharmaceutical field offers very sensitive products intended for a very wide range of customers. This is why they should check regularly.

Fig. 2: organizational capital within the companies in the study.



3.3.3 Relational capital within the companies in the study:

Every company must build a good relationship with its external environment. Through our questions on the subject, all of the respondents affirmed that they maintain solid relationships with the various external partners.

The survey results revealed the following data:

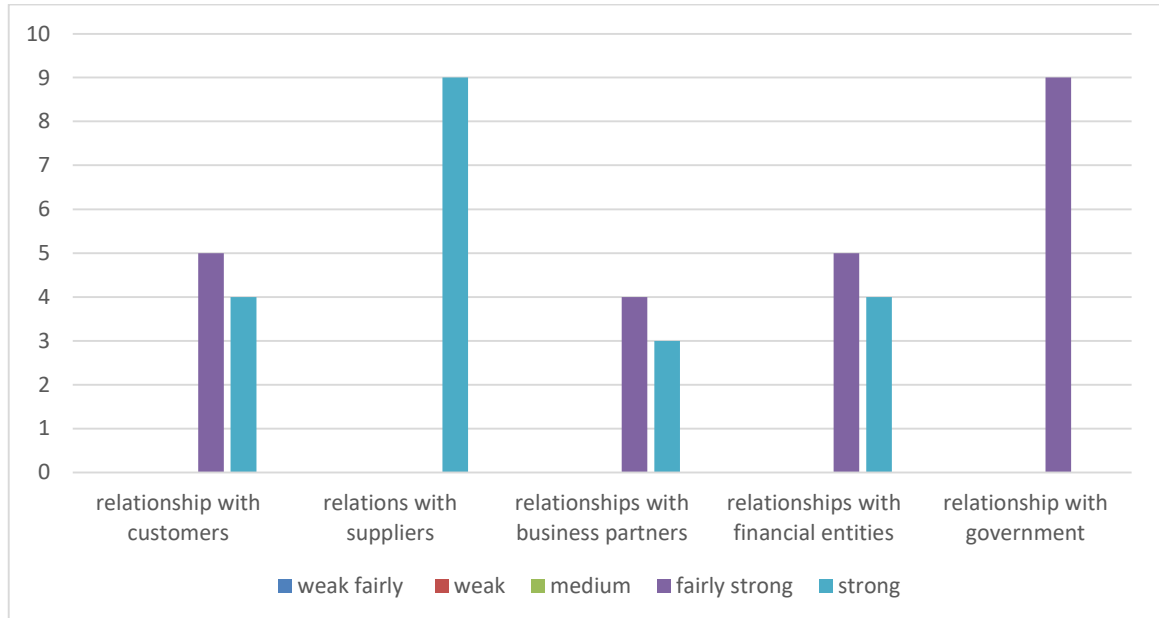
Regarding the relationship between firms and their respective clients, the results show that they build very good relationships with them. However, foreign companies emphasize on this point that since they offer originators, the majority of these customers are loyal customers who are interested in quality. While national ones which only produce generics, they manage to maintain customers as long as possible thanks to these efficient sales teams and multiple attractive offers.

In relation to suppliers, all respondents confirm the strength of the links they establish with the latter given that they depend on them to carry out their activities well.

As for relationships with business partners and financial entities, they are also well maintained due to the fact that the latter two participate in the smooth running of the businesses of the companies questioned and participate in their developments.

The data relating to the last criterion thus affirm the solidity of the connection which exists between the companies in the study and public establishments or the state. Since they depend on the latter for the regularization of procedures for importing raw materials, exporting products, marketing authorizations, etc. for example (see Fig. 3).

Fig. 3: relational capital within pharmaceutical companies in Algeria.



The survey of the nine laboratories allowed us to understand that even if the latter maintain very good relations with suppliers, business partners, financial entities and the government, the latter make it possible to facilitate the business climate and the proper functioning of activities but do not allow companies to achieve the set objectives and the desired competitive development. For our respondents, this is what allows us to maintain good relationships with customers and know

how to build their loyalty and keep them as long as possible and this cannot happen without a good, professional and competent sales force.

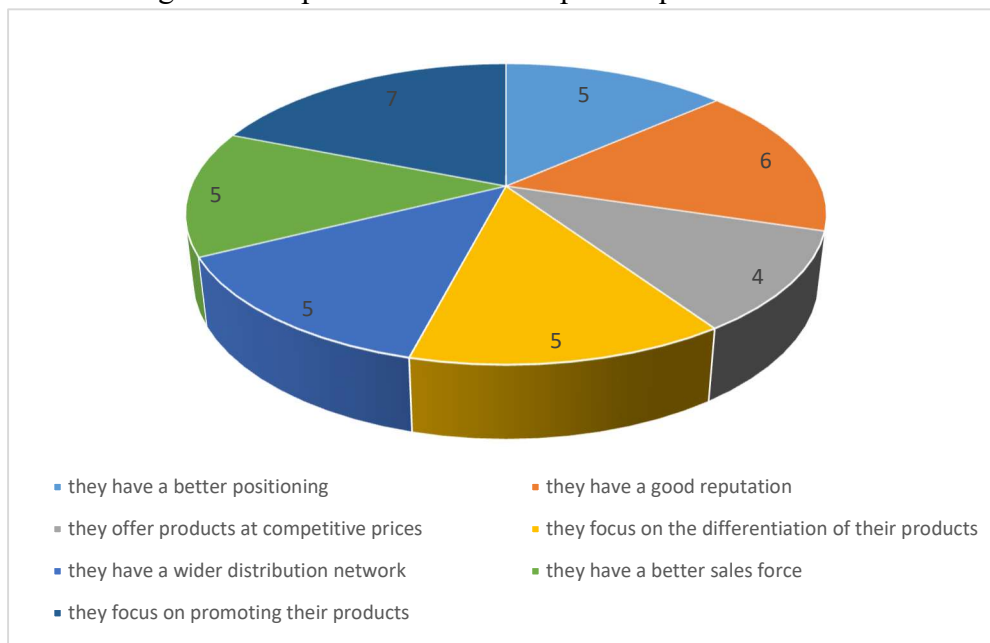
3.4. Competitiveness :

3.4.1 The strengths of the laboratories interviewed:

Regarding the strengths of the laboratories participating in our study, the reviews reveal that the majority of companies are strong in terms of promotion, brand image, product differentiation, sales force and positioning (see the graph No. 4).

Answers which show that the sales force represents the competitive advantage of our firms since it is responsible for sales and promotion, the two elements which allow any company to have a good positioning, a better brand image and good promotion which implies development compared to the competition.

Fig. 4: the strengths of the pharmaceutical companies questioned.



3.4.2 The performance of the companies interviewed:

Knowing that a company has not answered questions relating to financial performance.

Our questions have been grouped into three main types of performance:

- Market position:

This part brings together several criteria.

- As for the volume of sales, the majority of companies questioned believe that they achieve sales above average. The rest of the answers concern start-up companies that have not yet managed to position themselves on the market.

- Sales volume growth:

The data collected shows that the sales volume of the majority of companies is above average.

- Market share :

Two-thirds of companies report having above-average market shares. The answers concern the market leaders. While the rest report having market shares below the average or which align with the average.

- Market share growth:

Data collected from the responses shows that more than half of the companies experience a volume of market share that aligns with the average. The rethinks concern national and international leaders. While the restthink it is above average (see Fig5).

Fig.5: the position of the participating companies on the market.



• The profitability :

Regarding profitability, we questioned the participating companies on three essential points:

- The profit margin:

More than two thirds of the responses show that laboratories benefit from an average margin, while the rest say that it is above average. Responses which can be justified by the fact that prices are controlled by the state.

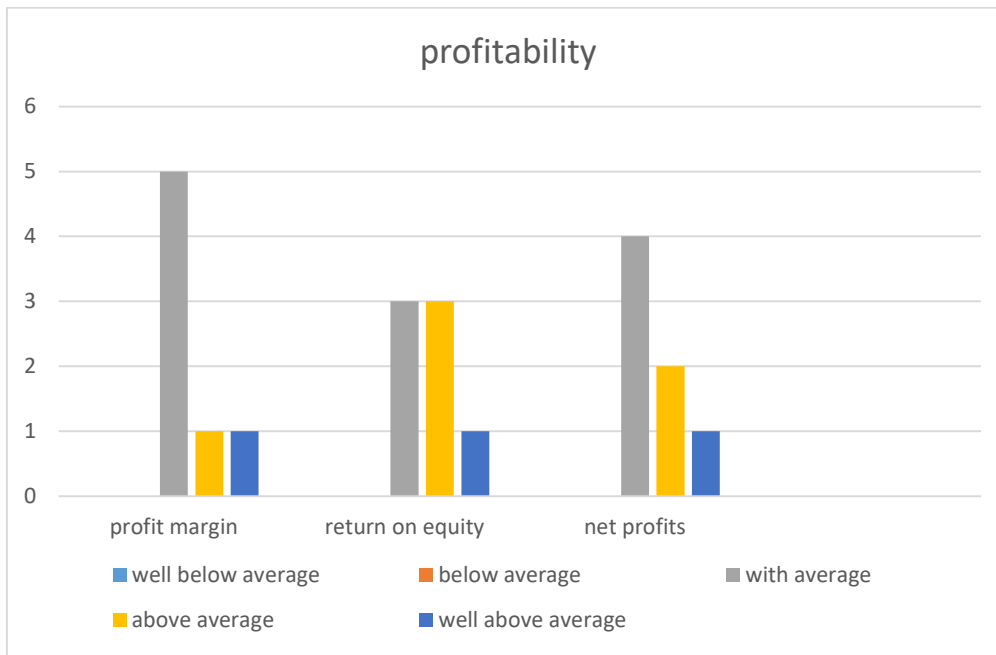
- Return on equity:

The results reveal that more than half of the respondents believe they have an above-average return on equity, while the rest are average.

- Net profit:

The results show that the net profit of two thirds is average, while the rest is above average (see Fig. 6).

Fig.6: the profitability of the companies questioned.



4. Discussion of results:

Research into the impact of intellectual capital on the competitive development of firms represents a very important subject which interests any company planning to develop and have a dominant position in the market.

The issue of competitiveness and intellectual capital has interested several researchers, who have largely participated in the enrichment of the literature and the birth of several currents of thought interested in this subject. In our work, we focused on the three aspects of intellectual capital. Namely human capital on which we focus on the sales force, structural capital and relational capital. These represent the main elements of our questions:

- The competitive development of pharmaceutical companies in Algeria can be the result of the use of human capital. This as a competitive advantage;
- The competitive development of pharmaceutical firms in Algeria maybe the result of the use of structural capital as a competitive advantage;
- The competitive development of pharmaceutical firms in Algeria maybe the result of the use of relational capital as a competitive advantage;
- The competitive development of pharmaceutical firms in Algeria can be the result of the use of the three components of intellectual capital;

Our study was carried out based on an immersion in the nine participating companies. In order to better understand and unseal the small details concerning the sources of their developments. Our study of laboratories and community pharmacies allowed us to collect the following data: All of the national private laboratories interviewed produce generic medicines, while those foreign ones all manufacture original drugs, except for one laboratory which produces some generics in addition to original drugs. Which brings us to the observation that international laboratories rely on innovation and product differentiation.

We have observed that all companies are adopting intensive distribution which aims to reach the four corners of the country, avoid shortages, outperform the competition and sell these products to as many whole salers and distributors as possible.

In terms of medical promotion, the results revealed that all the laboratories bring together two teams of delegates. Commercial and medical who ensure the dissemination of the right information and the realization of sales using practically the same methods (quantity discounts, gifts, training, free samples, etc.) the only thing that differs is the professionalism of the teams and the ability to negotiation (highest bidder system).

As for the competitive methods used, the results allowed us to note that:

- in relation to differentiation by innovation: the results revealed that companies attach great importance to R&D for process innovation, and are ahead of the competition in order to achieve a significant rate of innovation.

- As for marketing differentiation, we have noted that innovation in marketing techniques only interests foreign companies and national companies which make medical promotion an activity in its own right. The majority practice traditional methods. On the other hand, firms mainly rely on the sales force as their main competitive method. These results led us to observe that all respondents use marketing differentiation as a flagship practice and attach very great importance to the sales force.

- As for differentiation through innovation, it is a practice which interests foreign laboratories and national laboratories which seek to gain the scale of a generic monopoly.

With regard to human capital, our survey demonstrated that in terms of employee knowledge and skills, pharmaceutical companies have employees with a high level of mastery and professionalism, who are flexible and have a great capacity for learning. On the other hand we noted the fact that although pharmaceutical companies in Algeria are interested in the recruitment and preservation of qualified personnel, they attach great importance to the sales force and believe that it represents one of the best sources of 'competitive advantage.

In relation to organizational capital, the data revealed that although the majority of companies studied do not hold patents, they attach great importance to the implementation within their premises of various software programs to facilitate tasks for employees, systems information, databases and quality control standards. However, respondents think that the latter contribute to improving the internal organization of the company and do not have a big impact on its competitive development.

As for relational capital, the survey revealed the importance that pharmaceutical companies attach to the development of good relationships with suppliers, business partners, financial entities and the government, remains the relationship with customers, the element that concerns our respondents the most. Since they represent the means of achieving the objectives set and the desired competitive development.

4.1 The competitiveness of the companiesquestioned:

In terms of performance of the companies questioned, the results revealed that the majority of them achieve sales volumes and hold market shares above average with sustained growth. Only one company reports having below-average sales volume and market share. Due to the fact that it is starting in the field of production and these products are not yet known.

While in terms of profitability, the data shows that the majority of respondents benefit from an average margin, return on equity and net profit. Responses which can be justified by the fact that prices are controlled by the state.

To summarize the above, we can say that pharmaceutical laboratories in Algeria operate in a very harsh and very active competitive environment. Or all companies strive to surpass themselves using all accessible and possible means. To do this, they put in place differentmeanssuch as human, organizational and relational capital.

Our study demonstrated that all of the laboratories questioned use and attach great importance to the three components of intellectual capital. However, the impact of the latter on the competitive development of firms is different. Although organizational and relational capital allows companies to better organize themselves and establish effective relationships with the external environment. There remains human capital and especially the sales force, the component that allows the company to get ahead of its rivals.

The survey revealed that the companies questioned practice differentiation through innovation and cost control, this remains the most used and responded to marketing differentiation method. This allows them to increase their sales volumes, acquire additional market shares and achieve increasing turn over.

Conclusion:

The competitive development of a firm compared to its rivals demonstrates the level of performance of the best. Our comparative study with nine pharmaceutical industrial companies from different origins allowed us to verify the hypotheses stated at the beginning of our research and to understand the impact of their intellectual capital on their competitiveness.

Firstly, the results of the study allowed us to verify the availability, importance and impact of human capital on the competitiveness of companies. The data collected showed that all companies integrate this type of capital into their premises. However, firms affirm that human capital and more precisely the sales force strongly impacts their competitiveness.

In the second part we were interested in organizational capital, its integration, its importance and impact on the development of the company. The results demonstrate that all of the laboratories questioned attach great importance to the latter and adopt it as a management tool, however they believe that it does not strongly impact their competitive developments.

The third point to check concerns relational capital, the question of its relationship with the different actors in the external environment and its impact on the competitiveness of the company. The study revealed that all respondents rely on the latter and attach great importance to it, however, they think that it does not have a strong impact on their competitive developments.

Finally, to determine the impact of intellectual capital on the competitive development of pharmaceutical industrial companies in Algeria, we were interested in the performance and profitability of the latter. Which allowed us to come to the conclusion that whatever the origin of the company. Once it is based on efficient and professional human capital. And if the latter is focused on marketing differentiation while using skills in the field, the latter will be able to arrive and achieve the desired development objectives.

Bibliography List:

- Brooking. A, (1996), Intellectual Capital: Core Assets for the Third Millennium Enterprise. Thomson Business Press, London, United Kingdom.
- CIGREF, (2006), Intangible Capital - 7 days to understand, [http://www.CIGREF.fr/Capital immatériel-7-jours-pour-understand](http://www.CIGREF.fr/Capital%20immat%C3%A9riel-7-jours-pour-understand), France, PP 30-33.
- Drucker. P, (1993), Innovation and Entrepreneurship: Practice and Principles, Harper Collins Publishers, Inc., New York.
- Edvinsson. L, & Malone. M. S, (1997) Intellectual capital – Realizing your company's true value by finding its hidden roots. New York, NY: Harper Business.
- Grant.R. M, (1996), Toward A Knowledge-Based Theory of the Firm, Strategic Management Journal 17(S2):109-122.
- Lounissa. Mr. A, Fortas. F, (2021), Intellectual capital, Innovation and business performance, Algerian contextstudy, JEFB, volume 06, Number 01, June 2021, P: 599-610.
- Sardo. F, Serrasqueiro. Z, Alves. H, (2018), Universidade da Beira Interior On the Relationship Between Intellectual Capital and Financial Performance: A Panel Data Analysis on SME Hotels, International Journal of Hospitality Management 75:67-74.
- MHEDHBI Imen, (2010), intangible capital: interaction and creation of value - Case of Tunisian companies -, doctoral thesis in Management Sciences, Université Jean Moulin Lyon 3, France, pp 32-33.
- Smriti. N, Das. N, (2018), the impact of intellectual capital on firm performance: a study of Indian firms listed in COSPI, Journal of Intellectual Capital 19(1).
- Mehralian. G, Reza Rasekh. H, Akhavan. P, Reza Sadeh. M, Iran knowledge management association, (2012), the Impact of Intellectual Capital Efficiency on Market Value: An Empirical Study from Iranian Pharmaceutical Companies, Iranian Journal of Pharmaceutical Research 11(1);
- Yitmen. I, (2011), Intellectual Capital: A Competitive Asset for Driving Innovation In Engineering Design Firms, engineering Management Journal 23(2):3-19