

Moving from «partnership for manufacturing» to «partnership for innovation» in Algerian pharmaceutical industry: case of SAIDAL group

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Abstract— The partnerships between pharmaceutical firms have been driven development of industry for years, because the current pharmaceutical product development path is becoming increasingly challenging, inefficient, and costly. The value of these cooperatives goes above and beyond the financial transaction and could bring learning and opportunities.

The most important form of strategic change in SAIDAL group was establishing of new strategic alliances and joint ventures. So far as the research and development process for each drug take many years and requires significant investments, and the outcome of these investments of time and financial resources remains unclear until the final approval of the drug, the group is constantly looking for synergies that they can get from cooperation with multi-national companies.

Keywords— innovation, partnership, manufacturing, pharmaceutical industry, Saidal group.

I. INTRODUCTION

The industry has always had to face the challenges of the day and to act with speed and agility, as well as the continuous technological change. The pharmaceutical industry is highly dependent on technological horizons long before a drug is on the market.

One of the distinctive characteristics of the pharmaceutical industry is a very high level of investments in research and development, and Companies are under continues pressure to innovate and the literature suggests that more and more firms need each other to innovate.

Algeria has great potential in terms of development of the pharmaceutical industry in general and local manufacturing in particular. With 38 million Algerian population represents a significant market for drugs, especially as the country has a large number of prescribers, a pretty decent health insurance coverage and it is located economically in an intermediate situation between the developed countries and poor countries.

It is noteworthy to mention that the target objective of Algerian pharmaceutical sector is achieving 100 research centers, 17 technology platforms and 21 technical platforms at the end of 2014, by developing a real strategy of scientific research. [1]

II. ALGERIAN PHARMACEUTICAL SECTOR CHARACTERISTICS

The pharmaceutical market in Algeria, like other developing countries, is a branded market which means patented and generic pharmaceutical products are marketed under specific brand names, Close to 85% of the total revenues are derived from branded generics.

The value of the Algerian pharmaceutical sector has been on the rise in the past years. In fact, from 2005 to 2010, the market has been increasing at an annual average rate of 7 percent. Both the local and foreign pharmaceutical companies contribute to this fast growth rate. [2]

This market has witnessed considerable progress over the years due to favorable demographic and economic factors, and strong government support for healthcare. But a vast majority of pharmaceuticals consumed in the region are branded and imported (most pharmaceutical imports are from Europe, USA and Middle East countries). However, the governments have been trying to increase local drug manufacturing and reduce reliance on imports by encouraging joint ventures and licensing deals with multinational pharmaceutical companies. Use of generic drugs is also being promoted to lower the excessively high drug prices and healthcare burden on the public sector. [3]

The pharmaceutical sector in Algeria has been offered certain concessions by the government keeping in view the importance of the sector. There are no restrictions on foreign ownership and the sector enjoys the advantage of full repatriation of profits. The multinational pharmaceutical companies dominate significant portion of the Algerian market share.

A. Domestic firms in Pharmaceutical industry

The domestic pharmaceutical firms can be categorized into two broad groups – the medicines traders and the medicines manufacturers. The first one imports finished products and distribute them to the local market either through their own distribution units or affiliates.

The second group consists of local manufacturers which are manufacturing either for themselves and/or for other companies. The majority of firms (78%) were created after 2000. [4]

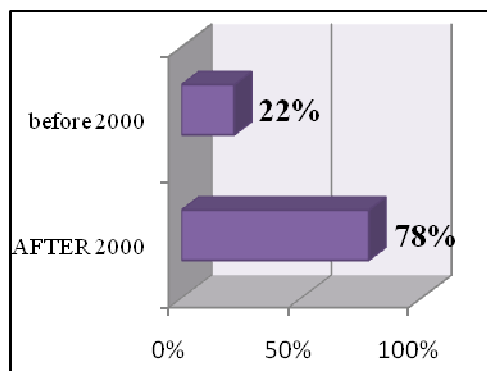


Fig. 1 Age of Algerian domestic firms

B. The main investors in the Algerian's industry

The presence of several foreign investors in Algeria, reflects the large weight that monopolizes the industry throughout the domestic industry.

The main investors in the pharmaceutical sector in Algeria are: [5]

- The French laboratory SANOFI-AVENTIS is No. 1, with 13% market share (\$ 320 million in 2009)
- The Jordanian laboratory HIKMA PHARMA (164,863,013 dollars);
- The Algerian group SAIDAL (149,187,464 dollars);
- The UK laboratory GLAXO SMITH KLINE « GSK » (141 958 937 dollars);
- The Swiss laboratory NOVARTIS (129,138,999 dollars);
- The Danish laboratory NOVO NORDISK (85,264,536 dollars);
- The American GROUP MERCK and Co (85,264,536 dollars);
- The Swedish UK group ASTRA ZENECA (85,264,536 dollars).

These companies are present either directly in the market or through under-licensing/contract manufacturing. Many of the multinational companies have also entered into co-marketing arrangements with the local firms.

III. SAIDAL GROUP OVERVIEW

While shedding light on the pharmaceutical industry in Algeria, it is imperative to also shed light on one of the largest and leading companies in the industry, SAIDAL group, which has managed over the years and since its inception in 1985, to become the first largest public shareholding company in the pharmaceutical sector and to occupy an advanced position

amongst some of the largest pharmaceutical companies worldwide in Algeria.

A. About the group

SAIDAL group is an Algerian pharmaceutical company which is focused on developing, manufacturing and marketing generic and in-licensed pharmaceutical products in various dosage forms. The main activities of SAIDAL group include:

- Formulating and manufacturing of own branded generics;
- Manufacturing products under license from leading pharmaceutical companies.

The group manufactures a wide range of pharmaceutical products. It has more than 251 products (in more than 18 dosage form) in approximately 20 therapeutic segments and sells its products in around 12 countries. [6]

SAIDAL is third largest player in Algeria with a market share of 8% in 2010 and has doubled its sales over the past 5 years. The group strengthened its position in market through Generic pharmaceuticals segment. [7]

B. Research and development

The R&D division is in charge of product formulation, process design and monitoring of bio-equivalency testing for all of SAIDAL's products. The R&D division also focuses on developing new generic pharmaceutical products; improving and upgrading manufacturing techniques; and performing research and development activities related to the manufacture of API (Active Pharmaceutical Ingredients). [8]

The group has a team of scientists, pharmacists, microbiologists, chemists, chemical engineers and industrial engineers working in the R&D division of the group. SAIDAL Group guidelines in pharmaceutical development and technological innovation are focused on:

- New pharmaceutical forms ;
- The innovation of manufacturing processes and control ;
- The development process of herbal medicines.

SAIDAL has currently 19 products under development. The group management has indicated that they want to launch at least 5-6 products each year. [9]

IV. SAIDAL'S MANUFACTURING AGREEMENTS

After 1990, SAIDAL becomes a good candidate to do under-license and contract manufacturing for multi-national companies. It already does under-license manufacturing for foreign companies. It is yet to enter into contract manufacturing in a big way, though the company has plans on this front. However, in general, under-license manufacturing is much more lucrative.

These engagements (table.1) provided many strategic advantages to SAIDAL group, including lower manufacturing scale-up costs, easier access to core competencies in specialized processes and equipment, and improved efficiency and productivity. The value of partnering with these companies had impact on SAIDAL's bottom line by alleviating capacity constraints, reducing capital spending and improving supply chain predictability, building a solid relationship based on experience and expertise. [10]

TABLE I
MANUFACTURING AGREEMENTS SIGNED BY THE GROUP

Partnership	% SAIDAL's Share	Details	Date
P.S.M Pfizer Saidal Manufacturing	30	912 million DA, with production capacity of 30 million unit.	1998
R.P.S Rhône Poulenc Saidal	30	400 million DA With production capacity of 20 million unit.	1998
SOMEDIAL Saidal Groupement Pharmaceutique Européen	24.7	980 million DA With production capacity of 27 million unit.	1998
ALDAPH Saidal Novo Nordisk (Danemark) et Pierre Fabre (France).	10	44 million \$ With production capacity of 37 million unit.	1999
Saidal Acdimia (TAPHCO) TASSILI PHARMACEUTICAL	44.51	1017million DA. With production capacity of 30 million unit.	1999
SAIDAR Saidal –Dar El Dawa (Jordan)	/	120 million DA	1999

These agreements with well-known large companies allowed the group to:

- Undertake formulation, process and scale-up of manufacture;
- Comply with Good Manufacturing Practice for formulation/ tableting;

- Conduct small to large-scale manufacture and distribution (local/ regional);
- Conduct studies of generic formulations (e.g. stability, bioequivalence);
- Ability to maintain and demonstrate a completely controlled production process;
- Undertake formulation, process and scale-up of generic drugs.

I V. COOPERATIVE AGREEMENTS TO PERFORM R&D ACTIVITIES

After 2000 (table.2) , SAIDAL group had a proven track record of working with global licensing partners, and its highly skilled workforce and existing production capabilities made the company even more attractive to multinational partners.

It is planned as part of its new partnership strategy the transfer of technology and knowledge and the creation of start-ups and research platforms to encourage investment and support the creation of technology incubators. [11]

TABLE II
STRATEGIC COOPERATIVE ENTERED INTO BY SAIDAL GROUP AFTER 2000

Partner	Date	Number of new Product
Dar Aldawa (Jordan)	2002	07
Eli Lilly (USA)	2002	02
Sanofi Aventis (France)	2003	03
Mepha (Switzerland)	2004	03
Abolmed (Russia)	2004	04
Biotechnica (Tunisia)	2004	03
Solvey Pharm (France)	2004	02
Medi cuba(Cuba)	2004	04
Hayat Pharm(Jordan)	2004	02
Meheco (China)	2005	03

SAIDAL group engaged in R&D cooperatives because they allow the utilization of external resources -technological opportunities such as:

- Access rights to original drugs and their registration data for further development (e.g. combination with other drug or new formulation);

- Conduct limited preclinical studies, bioequivalence studies and clinical trials to international licensure standard;
- Prepare regulatory dossiers for clinical trial authorization and drug registration, using both data from their own clinical studies and referencing quality, safety and efficacy data from original drug regulatory file;
- Design and implement clinical development plans for drugs;
- Prepare complex regulatory dossiers for clinical trials authorization and novel drug registrations.

VI. PATENTS FILED BY SAIDAL GROUP BETWEEN 2005-2010

The innovation strategy adopted by the Centre for Research and Development has during the years 2005-2010 obtaining 15 patents (table.III). [12]

Capabilities of SAIDAL group for innovation was strengthened through the previous partnerships, the next table shows Patents filed between 2005 -2010:

TABLE III
PATENT FILED BY THE GROUP BETWEEN 2005-2010

Partner	Filing date	Obtaining Date	Development Method
Formulation of Orodispersible tablet coated with acetylsalicylic acid	04/2005	2006	Developed With Foreign partners
Formulation of orodispersible tablet containing acetaminophen coated	04/2005	2006	
method of manufacturing a powder for suspension of amoxicillin trihydrate	04/2005	2006	
Formulation and manufacturing process of a solute rehydration infusion	04/2005	2006	Internal development
Formulation of a rapidly disintegrating matrix	11/2005	2007	
Orodispersible tablet formulation of ibuprofen-based coated	05/2007	2008	
Adjuvant treatment with anti diabetic herbal	08/2007	2008	Developed With
Producing a Herbal slimming capsule	08/2007	2008	

Producing a herbal cream veinoprotecteur	08/2007	2008	Foreign partners
Capsule manufacturing adjuvants	08/2007	2008	
Capsule manufacturing additives in anti hypertensive treatment	08/2007	2008	
Formulation of orodispersible tablet of ondansetron base.	08/2007	2008	Developed With Foreign partners
Manufacture of natural sexual stimulant capsule	08/2007	2008	
Formulating an orodispersible tablet olanzapine base.	12/2007	2008	
Manufacturing process as sublingual tablets	03/2008	2010	

Table.III demonstrate that the previous partnerships have generated a process of transfer of knowledge and technology (most of obtained patents were with partners). The total number of patents filed has increased steadily, particularly in 2007.

VII. CONCLUSION

In pharmaceuticals industry open innovation is seen as essential for keeping up with new developments in related technologies, and keeping options open to new technologies. Products and production processes are more sophisticated and their creation needs bringing together the competences of more than one firm.

The most important reasons for firms to cooperate are strategic, especially those related to the improvement of competitive advantage. Strategic reasons stand out notably.

SAIDAL group has a wider range of reasons to cooperate yet those of innovation nature are given more priority and The case study illustrates that accumulation of alliance experience and frequency in cooperation play a decisive role for SAIDAL to enhance its potentials to innovate.

The Partnership for Innovation will help realize SAIDAL's vision of delivering affordable medicines for its patients by pilot-testing cost-effective approaches that have the potential to improve patient care.

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