PHARMACEUTICAL INDUSTRY IN STRATEGIC DEVELOPMENT

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Abstract

World pharmaceutical industry has been changing profoundly as it has been steadily concentrating and consolidating in the last decade. According to our survey, we may underline the intensive marketing management represents an extremely important operational and even strategic function for proper business performance and long-term strategic orientation for the world pharmaceutical companies. We may even conclude that intensive consolidation of world pharmaceutical industry is a market driven and conditioned by strategic marketing management issues. We may estimate that marketing management is to play even more important and especially the highest top priority strategic role in the future globalization and consolidation processes of world pharmaceutical industry.

Key words: pharmaceutical industry, globalization, consolidation, marketing management

JEL Codes: F23, I11, L12, M31

1. Introduction

We may define the major characteristics of the world pharmaceutical industry as follows:

- increased globalization,
- changing structure of competition and increased competitiveness,
- lack of brand new products, despite increased investments into R&D (Research & Development) activities,
- increased importance of regulatory issues (registrations, intellectual property rights, litigations),
- fast consolidation and concentration of the world pharmaceutical industry,
- increased importance of marketing management,
- development of new therapeutic fields and technologies (biotechnology, pharmacogenomics),
- ageing of the world population and opening up of new, not yet covered therapeutic fields,
- quick development of world generic markets.

World pharmaceutical market has undergone fast, unprecedented, tremendous and complex changes in the last several years. We may say that pharmaceutical industry has been adapting itself more to the market trends and market demands. Further strategic development of the world pharmaceutical industry shows relatively clearly its significant consolidation and concentration and strong market orientation. Pharmaceutical industry today probably unite the biggest of all mankind potentials. Development of brand new drug is today estimated to need investment over 1.2 billion $ and takes over 12 years to bring it as a finished, legally registered and approved product to a market place (Pharma Strategy Group 2007, p.43). This is at the same time very complex, comprehensive and highly risky job with no final guarantee that a new product might succeed onto the market and bring revenues back. If a pharmaceutical company wants to achieve with a brand new product the market success, it needs to invest heavily into marketing and sales activities. Thus is by no surprise as we may conclude that basic research and development activities (R&D) together with marketing and sales activities are two the most important operative and even more strategic activities of the world pharmaceutical industry. Here the biggest investments of the pharmaceutical industry are poured by all means. Having analysed these figures, we have found that the biggest, inventive pharmaceutical companies invest on average around 16% of their sales into R&D and even more, around 25% or even more, into marketing and sales activities (Kesic 2006, p.22). However, these ratios, especially these
ones for R&D investments, are even higher with specialists, like biotechnology and pharmacogenomic pharmaceutical companies, and much lower with generic pharmaceutical companies (Kesic 2006, p. 28). As mentioned, world pharmaceutical industry is structurally not unique, as pharmaceutical companies differ according to their basic performance, vision and strategic development. We may define three different groups of the world pharmaceutical companies:

- pharmaceutical companies which primarily work on basic research, development and marketing and sales of brand new, innovative, original pharmaceutical products (so called originators),
- pharmaceutical companies which primarily work on development and sales of generic products (so called generic or copycat producers),
- pharmaceutical companies which primarily work on basic research and development of biotechnology and pharmacogenomic products and technologies of new delivery systems (so called specialists).

The world pharmaceutical market has been growing steadily in the last years. In the year 2008, a world pharmaceutical market achieved total sales of 715 billion $ and growth rate of 4.5 % (World Review 2009, p.7). The fastest growing world markets and regions are the markets of China, India, Central East Europe region (Russia, Poland) and certain markets of Latin America (Brazil, Mexico). It is estimated that the world pharmaceutical market will grow by an average 5% CAGR (Compounded Annual Growth Rate) till the year 2016 (Pharma Strategy Group 2008, p.34).

Table 1: World pharmaceutical market from the 2004-2008

<table>
<thead>
<tr>
<th>Year</th>
<th>Value in bn $</th>
<th>Growth in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>547</td>
<td>11.6</td>
</tr>
<tr>
<td>2005</td>
<td>602</td>
<td>10</td>
</tr>
<tr>
<td>2006</td>
<td>643</td>
<td>7</td>
</tr>
<tr>
<td>2007</td>
<td>684</td>
<td>6.4</td>
</tr>
<tr>
<td>2008</td>
<td>715</td>
<td>4.5</td>
</tr>
</tbody>
</table>

Source: adapted from World Review 2009

We may argue that products are by no means the main drivers for growth of the world pharmaceutical industry. Pharmaceutical companies strongly compete on products' characteristics and tend to invest heavily into marketing activities in endeavour to gain prescribers/patients loyalty and to compete as well directly with other pharmaceutical companies.

Table 2: Leading world pharmaceutical companies in the 2008*

<table>
<thead>
<tr>
<th>Position</th>
<th>Company</th>
<th>Country of origin</th>
<th>Sales in bn $</th>
<th>World market share in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Pfizer</td>
<td>USA</td>
<td>44.2</td>
<td>6.2</td>
</tr>
<tr>
<td>2.</td>
<td>sanofi-aventis</td>
<td>France</td>
<td>37.8</td>
<td>5.3</td>
</tr>
<tr>
<td>3.</td>
<td>GlaxoSmithKline</td>
<td>Great Britain</td>
<td>37.7</td>
<td>5.2</td>
</tr>
<tr>
<td>4.</td>
<td>Roche</td>
<td>Switzerland</td>
<td>33.2</td>
<td>4.6</td>
</tr>
<tr>
<td>5.</td>
<td>AstraZeneca</td>
<td>Great Britain</td>
<td>31.6</td>
<td>4.4</td>
</tr>
<tr>
<td>6.</td>
<td>Novartis</td>
<td>Switzerland</td>
<td>28.1</td>
<td>3.9</td>
</tr>
<tr>
<td>7.</td>
<td>Johnson&amp;Johnson</td>
<td>USA</td>
<td>24.3</td>
<td>3.4</td>
</tr>
</tbody>
</table>
The leading ten world pharmaceutical companies currently command over 42% market share of the global pharmaceutical market. For comparison reference, this figure was only 30% ten years ago. This is a clear sign and proof how intensive market consolidation and concentration of the world pharmaceutical industry has changed world pharmaceutical market in the last several years.

The world pharmaceutical industry has undergone deep changes in the last decade. Most notably, the strong process of consolidation and concentration has been going on, practically in all three defined pharmaceutical sectors; numerous mergers and acquisitions have occurred, resulting in the forming of complete new companies, respectively. We may argue that competitiveness in the world pharmaceutical industry has been increasing tremendously. We have analysed and scrutinized a whole business chain in the pharmaceutical performance and found that, for a proper understanding and valuation, someone needs to entirely monitor the "Whole 11-P chain circle (product, patent, price, place, promotion, payers, providers, physicians, pharmacists, pharmaceutical industry, patients)" (Kesic 2000, p. 31) to get a relevant picture in the whole process, coming from a rough idea (what is to be a future medicine) till giving a final user (patient) a proper ailment relief.

**Figure 3: 11-P chain circle**

![11-P chain circle diagram](image)

We may forecast that, taking into account the mentioned factors, further consolidation and concentration of the world pharmaceutical industry is realistically expected. We may foresee a formation of even bigger pharmaceutical concerns in all three sectors of the pharmaceutical industry. Alongside, further lack of brand new products is expected with highly increased competitiveness and a furious fight for market shares and global customers' loyalty.

### 2. Research objectives

We aim trying to find out how marketing management practices are important and in direct relation with a business performance of the world pharmaceutical companies. Moreover, we would like to evaluate how decisive is a marketing management in the strategic orientation of pharmaceutical companies and in which way it influences a strong consolidation process of the world pharmaceutical industry.

### 3. Globalization in the world pharmaceutical industry

We can stipulate that the globalization is almost a synonym for a modern economy. Nowadays the global competition is mostly based on the knowledge and technology and ability to serve the customers properly, swiftly and repeatedly. OECD defines globalisation as "Spreading and deepening of companies performance with the target to produce and sell goods or services on multiple markets (OECD 1993, p.73)". Later definition of globalization from OECD (OECD 1994, p.55) says that...
"More precisely we may define globalisation as a developing pattern of international business cooperation, which includes investments, trade and contractary ways of cooperation, and targets the development of products, production, procurement and marketing. Such kind of international performance enables the companies to conquer new markets, use their technological and organisational advantages and to lower the costs and risks." Globalization is thus strongly related with the increased mobility and competition. The most active subjects of the globalization process are definitive transnational or multinational corporations. We may argue that the following characteristics are significant for their performance, especially taken into consideration as the example the multinational pharmaceutical companies:

- multinational pharmaceutical companies have had a strong market position on the most important and strategic world markets with holding of considerable market shares,
- they globally integrate and connect their business performance, so national identity is no longer important,
- they perform a flexible purchasing management strategy,
- have had a global network structure of production,
- have had a global network organisation of research and development activities,
- have built a global marketing organisation structure which supports a dedicated market orientation and a strategic priority focus to customers.

We may even emphasize that the globalization is in its core meaning a complex, market conditioned world process, which is related and driven by a whole palette of elements of marketing way of thinking and performing, sudden, fast changes and ever-changing ways of doing business, alongside an increasing competition and competitiveness, in a strive to optimally identify changing needs of the world customers and to ability to satisfy their longterm needs. We may say that it is very important to have in mind to know how to detect the needs of customers and how to satisfy them on a longterm basis. We may emphasize as well that the customers should be treated as the most precious value of a company. This is a way we underline that the globalisation is a market driven process. Thus in a process of the globalization it is core to be fast, to be strongly market oriented, to have loyal customers, to be innovative, to have proper knowledge, to be able to learn fast, to have proper information and to take quick decisions. Drucker (1992, p.86) mentioned five the most important elements of development which would influence greatly the strategies, structure and performance of future companies:

- " Economic relations would be performed in the direction among trade blocs instead of countries,
- business performance would be more and more matter of strategic alliancing, which would be integrated into a world economy,
- restructuring of business would be intensifying and more globalising, it would be important to have information and knowledge,
- strategic management of companies would be decisive for a competitive success,
- intensive market orientation of companies would be a core advantage for achieving a competitive advantage over competitors ".

We may say that the world pharmaceutical industry has been in the intensive processes of the concentration and consolidation for a period of over 15 years. We may argue that research & development and marketing activities are two the most important and strategic priorities of the pharmaceutical companies and into which the greatest part of funds are being invested as well. According to
our research, we may say that the main strategic reasons for the intensive consolidation processes of the world pharmaceutical industry, are the following:

- lack of brand new products to drive sales growth further,
- fast globalisation processes of the world economy,
- huge investments needed for R&D activities,
- global marketing and sales activities which need large investments as well,
- increased competitiveness,
- changed structure of the competitors,
- world reforms of the healthcare systems,
- increased importance of the regulatory issues (registrations, intellectual property rights, litigations).

According to our research study and findings, there have been more than 10,000 various alliances formed in the world pharmaceutical industry in the last decade (Datamonitor 2005, p.67). We have found out the consolidation processes have been carried out practically in all three sectors (innventive - original pharmaceutical companies, generic producers and specialists) of the world pharmaceutical industry. The concentration process has practically created brand new phramaceutical players; however some previously well-known pharmaceutical firms have practically disappeared from the global market scenery. For example, the world leading pharmaceutical company Pfizer has been created from 6 big international players, including Pfizer itself, Warner Lambert, Upjohn, Searle and Pharmacia, and Wyeth, respectively. We may argue as well that the world pharmaceutical industry has become more and more oligopolistic indeed. We may entirely agree with Knickerbrocker theory of oligopolistic reaction (Knickerbrocker 1973, p.69) which says, that "Oligopolistic companies, as minimizers of taking risks in avoidance of destroying effects of competition follow each other to new markets to protect their own interests. It is significant that the action of one player creates a reaction of the other competitors, an action creates a reaction and so the story of oligopolisation is going on." We may conclude that Knickerbrocker's theory perfectly illustrates and explains a consolidation process of the world pharmaceutical industry. Consolidation processes are continuing to speed up as the pharmaceutical companies try to follow their competitors' strategy of M&A (Mergers and Acquisitions) in endeavour to maintain their global market position and a long-term competitiveness.

It is thus evident that some stand-alone pharmaceutical companies are not able to satisfy longterm and ever-changing market needs and customers' expectations, to invest heavily into R&D and marketing activities in endeavour to bring new products to global markets and materialize them properly. We can argue that this process enables pharmaceutical companies new development circles and their long-term development and growth. Formation of partnerships for a sake of the maintaining long-term competitiveness is today one of the most usable strategies in the world pharmaceutical industry. We may argue that pharmaceutical companies make alliances in endeavours to create common synergies and to better exploit their common assets, knowledge, product life cycles and moreover to upgrade marketing management strategies. Thus we may argue that the most important and strategic activities of creating common strategies for the pharmaceutical companies are:

- research and development (R&D), due to creating of brand new products,
- products, due to drive the sales growth and gain market shares,
- markets, due to create geographic and market expansion,
marketing and sales, due to enforce marketing and sales activities to compete on the global markets and to drive further sales growth.

We may say as well that due to a complexity in the pharmaceutical industry it is not unusual that the pharmaceutical companies tend to form partnerships and to compete at the same time. They can cooperate on some particular projects (for example R&D projects), however they compete strongly for particular market shares. We have found out in our research that this is so called "C and C phenomena" as we may even call it "Co-opetition" (cooperation and competition at the same time) (Zineldin 2004, p.45).

Pharmaceutical companies tend to internationalise and globalise their business activities sooner as in the past due to a market liberalisation, increased competitiveness and a need to reach considerable economies of scale.

**Table 3: Overview of pharmaceutical alliances in the 2006, 2007 and 2008**

<table>
<thead>
<tr>
<th>Target - taken-over company</th>
<th>Acquirer</th>
<th>Creating of synergies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schering AG, Germany</td>
<td>Bayer, Germany</td>
<td>R&amp;D, markets, marketing &amp; sales</td>
</tr>
<tr>
<td>Serono, Switzerland</td>
<td>Merck KGaA, Germany</td>
<td>R&amp;D, markets, marketing &amp; sales</td>
</tr>
<tr>
<td>Schwarz Pharma, Germany</td>
<td>UCB, Belgium</td>
<td>R&amp;D, products, markets, marketing &amp; sales</td>
</tr>
<tr>
<td>Altana Pharma, Germany</td>
<td>Nycomed, Denmark</td>
<td>R&amp;D, markets, products, marketing &amp; sales</td>
</tr>
<tr>
<td>Kos Pharmaceuticals, USA</td>
<td>Abbott, USA</td>
<td>R&amp;D, products</td>
</tr>
<tr>
<td>Organon BiSciences, the Netherlands</td>
<td>Schering-Plough, USA</td>
<td>R&amp;D, markets, products, marketing &amp; sales</td>
</tr>
<tr>
<td>MedImmune, USA</td>
<td>AstraZeneca, UK</td>
<td>R&amp;D, markets, products (vaccines), marketing &amp; sales</td>
</tr>
<tr>
<td>Merck Generics, Germany</td>
<td>Mylan, USA</td>
<td>markets, products, sales</td>
</tr>
<tr>
<td>Wyeth, USA</td>
<td>Pfizer, USA</td>
<td>R&amp;D, markets, products, marketing &amp; sales</td>
</tr>
<tr>
<td>Genentech, USA</td>
<td>Roche, Switzerland</td>
<td>R&amp;D, markets, products, marketing &amp; sales</td>
</tr>
<tr>
<td>Schering-Plough, USA</td>
<td>Merck &amp; Co., USA</td>
<td>R&amp;D, markets, products, marketing &amp; sales</td>
</tr>
</tbody>
</table>

Source: adapted from the companies official published data

According to that Svetlicic (Svetlicic 1996, p. 59) stipulates that "Modern ways of the internationalisation with an aid of network formation and strategic alliances enable internationalisation without a growth of the companies. Today companies decide for internationalisation and alliances due to:
- be closer to customers,
- increase effectiveness,
- gain a better access to technologies and knowledge (know-how),
- protect them from competitors (strategic reasons)".
4. The importance of marketing management in the world pharmaceutical industry

World guru of management Drucker, who especially emphasized a core importance of the marketing way of thinking and marketing management for a successful, longterm highly competitive business performance of the companies, has said (1993, p.69) about globalization and globalization management the following properly: “In the future, there will be two types of top managers: those who would be able to think globally with a strong marketing management commitment and those jobless”. Marketing-global way of thinking, performance and management thus enables companies to put customers into the centre of all their business activities, and integrally focusing all business activities to a common and final goal – to be successful in satisfying customers’ needs and to be better than competitors. It is worth to underline as well the importance of innovative management and the management of changes. As Bartlett and Ghosal underlined (1989, p.79), “Successful companies of today and tomorrow will be those ones, who would be able at the same time to satisfy local needs, increase global effectiveness and strive for a constant innovativeness and concomittant global learning”.

It comes as a no surprise to us that successful companies, and they will be successful in the future as well with this marketing management practices, know how to satisfy their focused customers. In these companies marketing and marketing management represent business philosophy of a whole company instead to be just a separate function. This perfectly underlines Drucker (1973, p.83), when saying "Marketing is so important that it cannot be a stand-alone function. If we look upon it from a point of the final result, that means from a point of the final customer, marketing represents a whole business, a whole business performance. Care for a marketing must go through all the company structures. Business success is not dependent upon a producer, but upon a customer. Thus whole and thoroughly marketing management concept should be the most important one in a company, and must prevail over innovativeness, organisation structuring, financial resources, physical sources, productivity, social responsibility and demand for a profit making". Marketing way of thinking and marketing management are especially important in the pharmaceutical industry as pharmaceutical companies tend to be market oriented and proactive by emphasizing the advantage of their pharmaceutical products. They try to communicate within regulatory allowed frameworks, they strive to build strong brand names (trade marks) and to create long-term loyalty to final customers. We may even say that in a certain way concept of the marketing management clearly designates a company's business philosophy, respectively. We may entirely agree with Corstijens' estimation (Corstijens 1991, p.55) that "Sector of the pharmaceutical industry, despite being very specific in the all aspects, is an ideal case, how a practice and usage of the marketing management concept directly relates to a very successful business performance of this industrial sector".

According to our research work, we may argue that a marketing management is by no doubt, besides R&D function, the most important function of the innovative company's business performance. Thus it is important to react and act quickly and to be proactive. An urge of the fast adaptation is not just the strategy for smaller companies and countries but it is a valid strategy of victorious success for the bigger firms, too, as changes in the world economy and globalization are really fast and tremendous. This is why we may argue that a marketing way of thinking and a marketing management are the decisive
factors of strategic business success for the pharmaceutical companies in the highly globalised and ever-changing world market place. We may argue the pharmaceutical companies which want to be globally the leading ones and successful business performers in the future, need to primarily think entirely and differently about customers, markets, competitiveness, competitors, and strategy with relation to a structure to reach the planned goals. Especially, they need to bear in minds that the needs of tomorrow customers are different from the needs of today’s customers and they do change fast and tremendously in a relation to elements and facts which are the most important to the pharmaceutical industry itself. In that relation, we foresee a role of the marketing way of thinking and marketing management as a decisive, crucial and the most important strategic function of a particular pharmaceutical company.

5. Findings and conclusions
The purpose of this paper is to analyse whether a marketing management plays an important role in the operational and strategic performance in the world pharmaceutical industry. Using a variant of public available data and information, predominantly on the business performance of world pharmaceutical industry, world pharmaceutical markets and the development trends within the pharmaceutical industry in our research work, we have found out that world pharmaceutical industry has been changing profoundly in the last couple of years. We provide empirical evidence that the intensive processes of concentration and consolidation have been continuing in all three sectors of the world pharmaceutical industry. In order to explain this phenomenon properly we have analysed in details the trends in the world pharmaceutical industry and key reasons for such movements. We have found out that intensive globalization process definitively influences and reinforces a consolidation of the world pharmaceutical industry. Further on, we may argue that increased competitiveness and amended structure of competitors which is conditioned by a merger and acquisition process, impact a strategic orientation of the particular world pharmaceutical companies. We have found out in our research survey that mergers and acquisitions prevail more and more as a viable strategic orientation for the world pharmaceutical companies. However, taken into account the analysed data, business performance of scrutinized pharmaceutical companies and outcomes of our research study, we may support the hypothesis that marketing management plays a predominant and strategic role in the world pharmaceutical industry. Further on, we may argue that a fast consolidation of the world pharmaceutical industry is clearly market driven and conditioned upon by a typical strategic marketing management issues, like: a lack of the brand new products, an intensive competitiveness, a fast globalisation, an increased global marketing and sales activities, a changed structure of the competitors, a fierce fight for the global market shares and customers’ loyalty. We may argue that a marketing management is going to play even more important and especially strategic role in the future globalisation and concentration processes of world pharmaceutical industry which we may foresee they will intensively continue. We may further conclude that a future strategic development of the world pharmaceutical industry will be predominantly dependent on the strategic marketing management issues that the pharmaceutical companies will be capable to understand, develop and imply properly in their operational and strategic business performances.

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