

Pharmaceutical Market(ing): Theory and Reality

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SUMMARY

The pharmaceutical market represents one of the most dynamic and controversial markets. Its specific features are rooted in the specific nature of its products and in the complex interests of the main constituents of market demand. Finding ways to improve marketing practice in the pharmaceutical sector lie in understanding marketing theory and best practice logic and comparing it with on-going everyday practice. Sensitive circumstances of using pharmaceuticals, their potential for abuse and harm, as well as a high level of public scrutiny make pharmaceuticals one of the most challenging practices.

Key words: pharmaceutical marketing, marketing, customers, market, analysis, market trends.

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THE INDUSTRY, POTENTIAL AND REASONING

The pharmaceutical market is an important one. Besides being important it is surely one of the most interesting or most intriguing markets. Thinking and writing about it will surely be a hot topic for years to come. Through the troublesome last decade the pharmaceutical industry kept pace – staying above troubles that put other industries between the proverbial rock and a hard place. Good business results have turned in an optimistic prognosis. According to Datamonitor's report "Global Pharmaceuticals, Biotechnology and Life Sciences" (from March, 2010) figures for the industry look fairly promising (see Table 1).

Table 1. Global pharmaceuticals, biotechnology and life sciences industry value forecast

Year	US\$ billion	€ billion	% Growth
2009	1,071.7	770.7	5.3%
2010	1,132.8	814.6	5.7%
2011	1,194.4	859.0	5.4%
2012	1,260.2	906.3	5.5%
2013	1,329.9	956.4	5.5%
2014	1,402.4	1,008.5	5.4%

Source: "Global Pharmaceuticals, Biotechnology and Life Sciences", March 2010.

Data on regional sales have an even greater analytic value when viewing the growth rate of individual regional markets. It is immediately obvious that placement of pharmaceuticals is predominantly related to developed countries, but at the same time, it is clear that growth potential resides in developing countries. Especially attractive markets are those achieving two-digit growth rates, such as Latin America, Eastern Europe, China and India.

The pharmaceutical industry is highly capital and technology intensive. The survival of companies in this industry is highly dependent on their research and development competence, as well as the ability to sell products, where remaining within national boundaries is not a sustainable strategy. The development potential of the pharmaceutical industry, the pace of change, high competition levels and forthcoming restructuring leave enough space for thinking about the specific aspects of pharmaceutical product marketing. The pharmaceutical market will continue to change and adapt to the new economic reality '...in which growth is shifting from mature markets to emerging ones; new product adoption is not keeping pace with the loss of patent protection by established products; specialty and niche products are playing a larger role; and regulators, payers and consumers are more carefully weighing the risk/benefit factors of pharmaceuticals' (Aitken, 2008)

How can the pharmaceutical industry count on such promising future? Understanding certain demographic and socio-cultural trends holds a lot of merit in answering that question.

The pharmaceutical industry and demographic changes stand in a direct and dual relationship. At the dawn of the 21st century, we are witnessing a demographic transition which will have changed the demographic map of the world significantly by 2050. On the one hand, changes in the availability of health protection (and access to pharmaceuticals), together with other factors, have directly contributed to the change in demographic parameters. The course of changes in the demographic structure, on the other hand, opens new potential for the pharmaceutical industry (see Table 2).

Table 2. Demographic facts: USA, Germany, Ethiopia, Hungary and Serbia

	USA	Germany	Ethiopia	Hungary	Serbia
Population (in millions)	302.2	82.3	77.1	10.1	7.5
Population 2025 (projected)	349.4	79.6	108.7	9.6	6.8
Fertility rate	2.1	1.3	5.4	1.3	1.5
Population under 15 (%)	20	14	43	15	18
Population age 65+ (%)	12	19	3	16	16.5
Life expectancy (years)	78	79	49	73	73
Infant mortality (per 1000 births)	6.5	3.8	77	8.7	8
Adults with HIV (%)	0.6	0.1	1.4	0.1	0.05

Source: CIA World Factbook, UN Population Database.

The first key change is a significant fall in the death rate. The most significant change in life expectancy since 1950 is recorded in developing countries. Maintaining mental and physical functions of the organism in mature age requires extensive health care, accompanied by increased use of medications. The second key change affecting the demographic structure is a drastic drop in birth rates induced by social and economic changes. In Western Europe, Southeast Europe, Japan¹ and North America, the population growth rate is beneath the basic replacement level.

The urbanization trend is significantly changing the social and economic picture of mankind. By 2030, 60% of the earth's population will be living in an urban setting,

which will also bring about a specific change of pathogen demography. 'Western drug makers have their eye on the rising urban middle classes of India, China, Brazil and other emerging economies, with their increasing incidence of diabetes, cardiovascular disease and other rich-country afflictions.' (The Economist, 2005, p. 17). The positive effects of urbanization in developing countries are also accompanied by the concentration of population in small areas without elementary sanitary, hygienic or health care conditions, which, basically, multiplies the spread rate and scope of infectious diseases.

Revolutionary discoveries within the pharmaceutical industry have significantly shaped the contemporary picture of the world. The question is, where are the opportunities for and threats to the development of pharmaceutical industry (and its profit) in this changed picture? The increased share of elderly population logically leads to increased needs for health care and pharmaceutical products. At the same time, the growing care of an economically inactive population is a vital welfare problem² - and the state prefers the use of generic medications in an attempt to minimize costs. Such an approach is a problem for the strongest pharmaceutical companies with developed R&D activities, but at the same time, producers of generic medicines (such as Stada, Actavis, Sandoz or Teva) are achieving above-average sales growth. Demographic changes, in their complexity, also require changes in business logic and behavior patterns of the pharmaceutical industry as such. They will be a growth generator for all pharmaceutical companies that know how to offer the right product, at the right price, at the right place, supported by appropriate communication telling the consumer and/or the prescriber³ that there is an appropriate product meeting a need or resolving a given problem in a manner superior to the competing products. Marketing as a science (and practice) is obviously devoted to searching for answers to these questions.

Growth, among other geographies, is in New Europe⁴. It has been an interesting experience to explore the marketing logic of pharmaceutical companies (domestic ones, but also regarding internationals), in the many ways specific Serbian pharmaceutical market. In order to assess, the room for improvement theory (or best practice) shall be put in comparison with on-going practice.

¹ The number of elementary school entrants in Japan dropped by 3.5 million between 1994 and 2004. 2000 schools were closed down, and 63,000 teachers became redundant. Japan and Southeast Europe have an almost identical long-term birth rate of about 1.2 (the basic placement rate is 2); the disbalance in the demographic structure in these areas is a probable scenario for most developed countries. (Population Bulletin, September 2007).

² A national welfare system was created in Germany in the 1880s led by the basic idea that healthy labor was productive labor. The age of 65 as the magical retirement age was chosen because at the time life expectancy hardly exceeded this boundary.

³ Prescriber – a person prescribing a prescription medicine; (s)he is usually a physician, but this term may also include persons giving advice or instruction on using a particular OTC medicine (such as a pharmacist, health care provider, etc.).

⁴ Euphemism coined to break away from negative associations of the terms Eastern Europe or the Balkan states.

THE ENVIRONMENT

Before we are able to tackle the challenges of pharmaceutical marketing theory and practice, we need to establish the basic logic of this market(ing), reaching out for the core difference which makes this area so unique. One of the most significant volumes on pharmaceutical marketing, Smith et al. (2002), qualifies their approach to marketing as environmentalist, thus highlighting the importance of environmental factors in marketing in pharmaceutical industry.

The essential value of content analysis of individual environment elements according to Smith et al. (2002) is undeniable, but the way they are laid out seems ambiguous and does not enable us to draw a clear distinction between controlled and uncontrolled impacts on the industry's marketing practices. The consumer is represented at the detailed analytic level, as a key factor of the internal environment, in a manner that strains the possibility of viewing the 'big picture' from the producer's aspect. The mezzo environment, or intermediate environment, is defined by the instruments of marketing mix, competitive environment and the company's internal environment, according to Smith et al. (2002). Marketers accustomed to traditional views of marketing may find such a setup confusing. Without diminishing the significance of content and elements for the successful management of pharmaceutical marketing, we shall try to elaborate the further analysis of '... the actors and forces outside marketing that [directly and indirectly] affect marketing managements' ability to' (Kotler and Armstrong, 2001, p. 87) create and deliver value added to the target market through a more rational and clearer framework of mutual influences.

With due appreciation to the key idea of marketing, the consumer/patient remains the central element, but their decisions to purchase and use pharmaceutical products (especially prescription drugs) are not independent; they are primarily determined by the influence of both prescribers and payers. All three actors on the demand side are influenced by a large number of (macro-) environmental factors, determining their process of information gathering, decision making and behavior on the pharmaceutical market. At the same time, when designing marketing mix instruments, pharmaceutical companies strive to influence the agents on the demand side in a complex competitive environment.

Macro-environmental factors act as a specific 'prism', affecting directly and simultaneously the design of marketing mix (supply) and constituents on the demand side: prescribers, patients and payers. Pharmaceutical industry marketers must understand the influence of macro-environmental elements on the target market's decision-making process and, at the same time, incorporate the influence of these elements into the creation and delivery of value to consumers through an appropriate marketing mix (see Fig. 1).

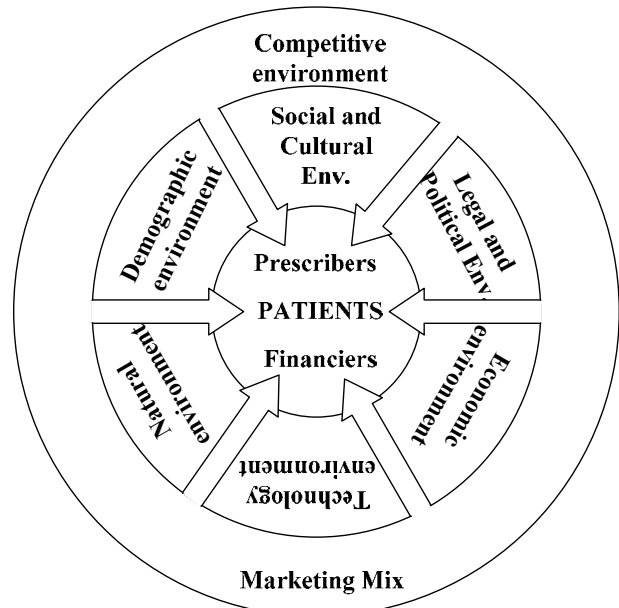


Figure 1. Complex view on the marketing environment of pharmaceutical marketing

THEORY AND PRACTICE

A special challenge that the subject raises is the existence of controversy generated from two sources. Marketing controversy stems from criticism leveled at the effectiveness and efficiency of marketing activities and the debatable ethical code of conduct. The other source of controversy is the pharmaceutical industry's profits, which result from operations on a market where the vulnerability of and/or disbalance in the organism is the motivator for purchase, which entails strong emotion in the persons in question, in their immediate social environment, but also in society as a whole. Once this profit is labeled as above-average, this may lead to the conclusion that pain and suffering are the best generators of profit. A cross-association of marketing and pharmacy produces a combination which has been the source of heated debate and fragile balance between positive and negative attitudes/emotions for decades.

Ever since the beginnings of history, medicine and pharmacy have intertwined in man's effort to overcome the biological limitations of the human organism. Both have accompanied humanity on the way from magic and divine to rational and science-based practices. The formation of the pharmaceutical industry in the second half of the 19th century marked the beginning of standardization of pharmaceutical products and regulation of the industry, and subsequently the sale and application of medicines. Now, 150 years later, the industry is one of the most vital global industries functioning on a specific market. According to Drews (2003), the pharmaceutical industry in the 20th century was marked by individuality, a primary focus on science and the process of scientific learning, while the ethics and morals of the industry derived from medicine itself.

The sum of human knowledge in the area of medicine and pharmacy has determined the pharmaceutical industry over the past few decades, and provided a theoretical basis for predicting the continued innovation that will ultimately transform the perception of the process of prevention, diagnosis and treatment. Today, discussing the pharmaceutical industry implies several burning issues:

- Blockbuster drugs – the contemporary pharmaceutical industry relies on the sale of a relatively small number of extremely successful drugs, whose annual sales, according to one of the criteria, exceed a billion US dollars. Blockbuster drugs are originator products, branded, and patent-protected drugs, the outcome of a long and costly R&D process. From the aspect of meeting humanity's medical needs, it is an objective fact that these drugs were developed to 'resolve' the morbidity statistics of highly developed countries - the chronic, high-incidence diseases of modern man. The development of new blockbusters and their survival are challenged due to the reduced efficiency of pharmaceutical companies' R&D process, generic substitution, and the trend of personalizing therapies through biopharmacy.
- Generic drugs are the outcome of the limited period of patent protection of the original pharmaceutical products, whose active ingredient becomes a 'common good' upon the expiry of patent protection. Apart from proven bioequivalence, generics guarantee the availability of high-quality drugs to the widest population, as competition in the production leads to a rapid fall in prices. Generic drugs do not bring about new quality or more effective therapy for an existing health problem, apart from wide availability of the drug. With the growing availability of healthcare, pressures on payers result in a preference for cheaper generic products. The essence of the dilemma related to the choice of (and/or preference for) the originator or generic products rests in the question of whether the pharmaceutical industry will maintain the levels of investment in R&D that will generate advances in therapy, which will mean better and more effective fulfillment of humanity's medical needs.
- Lifestyle drugs are a separate group of drugs intended for conditions that give rise to a philosophical/moral dilemma as to whether they can be regarded as pathological conditions requiring medical and/or pharmaceutical therapy. These are 'disorders' such as sexual dysfunction, hair loss, obesity, signs of skin aging, etc. This group of drugs may be regarded as the 'latest fashion' on this market, and Hawthorne (2005) terms this group of drugs

'Vanity Drugs'. The culture of the Western civilization actively contributes to the growth in demand for this category of pharmaceutical products, turning this trend into a new quest for the 'fountain of youth'.

- Biotechnology is the outcome of qualitative advances of medicine/pharmacy towards predictive and preventive medicine. The biotechnology concept is based on the use of biological systems, organisms and their derivatives. The most promising biotechnological discoveries are those in the field of recombinant DNA, with the potential of tailoring a man's/individual's genetic inheritance in such a way as to enable 'bypassing' biological limitations and irregularities. Biotechnology is related to the concept of individualized medicine/therapy tailored according to individual circumstances. Despite of the still modest results, expectations from biotechnology are practically unlimited.

Marketing is both a scientific (theoretical) and practical discipline. The abundance of marketing theory in academic circles is beyond dispute. There is a developed set of patterns, a glossary of the discipline, and a considerable body of knowledge. Once this knowledge leaves the premises of academia and enters the reality of economic life, a justifiable question is posed – to what extent is a set of generalized assumptions (and similar solutions) applicable in real life. This varies greatly from one industry to another. The application of marketing in the pharmaceutical industry surpasses the framework of its application in the fast-moving consumer goods industry, where the discipline has reached its heights.

Qualitative research on an appropriate sample within the territory of Serbia, which included ten leading companies creating the offer of pharmaceuticals on this market, has shown that marketing practices function in authentically specific conditions. First of all, the marketing function exceeds the framework of marketing profession and is taken over by pharmaceutical experts, who are, by their vocation and knowledge, closer to the nature, properties and application of the product than marketers would be. Such a solution objectively entails certain limitations from the aspect of knowledge of marketing principles, models and tools, which is reflected in their application in daily activities. Another significant determinant is based on the fact that this market functions within a strict regulatory framework, facing the application of marketing with a whole range of limitations.

The extensive body of available literature in the field of pharmaceutical marketing, supplemented by primary research, confirms the hypothesis that designing appropriate marketing strategies requires appreciation of specific conditions which distinctively define the pharmaceutical market as a separate, specialised market. However, designing and implementing an appropriate marketing strategy requires an organizational culture

supporting (and reflecting) marketing business philosophy.

The nature of the purpose of the products and specific defragmentation of the decision on the choice of products into several constituents that generate the demand for these products results in a different view of marketing. Koberstein (2001) refers to science-driven marketing, Appelt and Hauser (2006) call it clinical marketing, whereas respondents in the research conducted in the Republic of Serbia use the expression 'expert marketing'. The objective level of development of the pharmaceutical industry in the Republic of Serbia and other systemic limitations of a relatively underdeveloped economy, as well as the modest size of the market, do not leave sufficient space for viewing the complex logic and practice of pharmaceutical marketing in one of the most controversial contemporary industries. The very size of the US pharmaceutical market and the strength of global pharmaceutical companies competing primarily on this (in many respects) 'archetype market', but also on other markets worldwide, reveal all the controversies related to the industry and its (ab)use of marketing.

Is marketing a value free, negative or positive concept? It depends on one's point of view. The marketing concept starts from the consumer. The goal of marketing is to use a careful analysis of consumers' needs (and wants) to create a value proposition that will be able to fully meet their expectations (better than that of competitors). On this task, marketing uses sophisticated methods for researching the market, consumer behavior and competition, seeking to disperse the care of consumer satisfaction throughout the whole organization through a process of internal marketing. Modern marketing is value-driven, where the consumers and other constituents of the environment are regarded as partners, and marketing itself is focused on creating and maintaining long-term relationships with the target environment, surpassing a relationship based on a simple transaction. An organization's profits (and survival) result from superior fulfillment of consumers' needs. In the marketers' words, marketing has a clear value framework. It would be naive to believe that it is practically impossible to forget and/or deliberately distort this marketing logic in order to achieve opportune interests. In contemporary marketing, content holds sway over form, as only the ideas that add consumer or stakeholder value reflect a long-term orientation of marketing through creating added value.

Interviews with professionals involved in marketing in the pharmaceutical industry have revealed that this market shows a strong orientation of marketing on the content, i.e. information and knowledge is the function of the higher quality of decisions made by prescribers, in a joint mission of providing patients with the best possible and/or available therapy. Sackett et al. (1996, p. 71) consider the concept of evidence based medicine (EBM) as '...conscientious, explicit and judicious use of current best evidence in making decisions about the care of

individual patients.' Where does this evidence come from? It is the output of the scientific research process, clinical trials, advances in and development of the medical profession. However, according to Kushner (2007, p. 50), the 'pharmaceutical industry has inserted itself into every aspect of medical practice from medical education to basic research and clinical care.' Modern society has opened space for the pharmaceutical industry to legitimately claim the right to such impact, removing from society:

- a part (or all) of the care of continued education of physicians and pharmacists;
- the need to disseminate information in medicine/pharmacy via formal channels; and
- the conduct of clinical trials proving the effectiveness and safety of a drug at the expense of society.

In all this, the assumption on which the ethical/moral aspect of this concept rests is that commercial interest will not overpower the medical/altruistic interest. If the marketing function, marketing organizational unit and marketing activities were removed, would the problem disappear as well? Or are we trapped in a 'tangle of moral compromise', where each of the parties gives something in exchange for something, but none of them is entirely satisfied?

The crucial question is not whether the pharmaceutical industry needs marketing. The root of the issue of relation between medicine/pharmacy and the way that they fulfill the needs of individuals/society is much deeper. Peterson expresses her dissatisfaction: '...it's not the medicines that are the problem... The problem is the marketing. The marketing is distorting information that we, as patients, read and understand... There really isn't any place for marketing in medicine.' (Multinational Monitor, 2008, p. 43). The problem is in drugs also, as at the present level of development of science and technology, with the current amount of human knowledge, drugs do not provide the ideal that we strive for. Another indicative fact is that new adverse effects are still being found for verified drugs used for many years (even decades). A part of this complex jigsaw puzzle, man's struggle against biological transience, is also the fact that man's appetites are growing, with expectations bordering on what is currently regarded as science fiction. Despite all the disappointments, human expectations from medicine and pharmacy will keep growing.

'Surely, the scientists would argue, where the clinical differentiation is significant enough, marketing is superfluous.' (Moss, 2001, p. 31). Objectively, Moss' commentary is correct; however, even the best therapy will not yield satisfactory results from the aspect of the complex multitude of stakeholders if patients do not seek diagnosis and medical therapy (or at least not on time), or if the informative function of marketing activities is lacking, or a set of additional services that may raise the patient compliance levels. Marketing is not a substitute for a product's therapeutic value, but may make an

impact so as to realize this therapeutic value. According to Bearden et al. (2007, p. 445), ‘...developing new drugs is one thing; making them successful in the marketplace is another.’

For the ‘average’ consumer – the patient – oversized interests in pharmaceutical industry and the multitude of, often divergent, opinions on the benefits and/or dangers of drugs is a serious problem. Between the extremes that a drug may at the same time be a means of returning an individual’s life back to normal, but also a way of permanently disrupting the functions of the organism, and even threaten life, one may very easily find oneself in an endless succession of delights and disappointments. However, the very nature of the product and the circumstances in which the individual uses them mean that humanity will never be able to distance itself from the industry – as long as it is an industry rather than something else.

Avorn (in Kushner, 2007, p. 62) argues that prescribing physicians are also bombarded with a ‘...plethora of information of very uneven quality.’ The discourse on the mutual relationship between marketing and pharmacy can only be concluded by a lengthy debate on ethics. Is the aim of clinical trials to prove the effectiveness and safety of a drug, or to meet criteria that will enable the drug’s market launch? Is the purpose of information from pharmaceutical companies to raise levels of awareness of risks, symptoms and diagnostics of a disease, or is the primary motive to boost sales and/or market share? Is risk factor a disease to be treated pharmacologically or not? Do physicians give balanced advice on alternative methods of treatment and a change of lifestyle in the patient’s best interest, or is it in their interest only to prescribe pharmacological therapy? Does a prescriber give a balanced presentation of the beneficial and adverse effect of the drug (s)he is promoting? Attempts at answering these questions would probably end up in a division into those who find Jean Jacques Rousseau’s ideas on the nature of mankind closer and those who argue that Thomas Hobbes’ description of man is much closer to reality (see Lawson and Woliscroft, 2004). In a philosophical discourse on morality, it would be logical to pose the question of whether modern society is closer to the concept of ‘commercial morality’ or the concept of ‘watchdog morality’ presented by Thomas (2000), reflecting two utterly different concept of the social component of state/society, with implications for the medical/pharmaceutical sector as well.

WHAT THE FUTURE HOLDS

Can it be supposed in advance what the public thinks about pharmaceutical marketing? Does the solution to the controversy lie in better marketing rather than more marketing? The problems burdening both marketing and the pharmaceutical industry, as well as pharmaceutical marketing, result from the fact that the eyes of many are turned to the pharmaceutical industry, expecting it to resolve our every health (and psychological!) problem, just as the eyes of many are looking at marketing, expecting it to resolve every business problem, satisfy consumers, and meet all stakeholders’ expectations. There is certainly room for improvement.

If it were for the sake of selling clothing, fragrances, electronics or cars, humanity would be impressed by the marketer’s ability to anticipate and meet consumers’ needs, to actively design consumers’ wishes as an instrumentalisation of attainment of the consumers’ expressed and/or unexpressed (conscious and/or subconscious) consumer needs. ‘But drugs are different’ (Carey, 2008). There are other products that may be harmful to consumers if they are not produced and/or used appropriately, and other products that not everyone can afford, but there are few products that imply so many emotions, and so much pondering about what is fair and what is not – from the human organism, nature, social environment, or force majeure. In the end, different cultures/societies have found different ways of rationalizing this controversy.

The pharmaceutical industry has done a lot to objectively extend an individual’s lifespan, but people still have a finite number of years at their disposal. The complementary advances in medicine have enabled man to live longer and think less about biological limitations, but there is no supreme, ultimate and final result, approaching the mythical ideal of each individual’s conception. Does such a position have a price that affects the pricing of a pharmaceutical product as well? It certainly does. But everything has a price. Marketing is the connection between R&D, the production of a pharmaceutical, and the target audience in its broadest sense.

If nothing else, marketing is what makes the pill taste less bitter.

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