Socio-cultural Environment Influence on the Pharmaceutical Market Development

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Abstract
Demographic evolution, characterized mainly by the decreasing of the birth rate and the increase of life average standing in the developed countries, simultaneously with the increase of the birth rate in the poor countries, correlated with an increase/decrease of the level of living and of the preoccupation from the part of the population for health protection has determined major mutations in the volume and consume structure of the pharmaceutical products.
The present paper aims to identify the main demographic, social and cultural factors that have determined, during the last decades, a constant growth of the international and national market in the field of pharmaceutical products.

Keywords
Pharmaceutical market, consumer behavior, social-cultural environment, drugs consumption, medical prescription;

INTRODUCTION
General environment includes all the elements which exercise a uniform and indirect influence on a large number of companies, whereas the inverse influence is almost insignificant. [1]
General environment is composed by a big variety of the factors which allow us to structure and divide it in four sections: [4]
- Political and legal environment,
- Economic environment,
- Social and cultural environment and
- Technological environment.

1. GENERAL CONSIDERATIONS ABOUT SOCIO-CULTURAL ENVIRONMENT

Socio-cultural environment consists of models of individual and group behavior which reflect attitudes, values and habits. Some authors had completed socio-cultural environment with demographic factors, ethnic and other factors which reflect changes in the geographical population distribution, migration from rural to urban areas or toward an economic developed areas.

The most important social and cultural factors which have a significant influence on business environment and company development are: life style, value system, and people’s attitude regarding business, work, government, administration, social security, ethnic problems, and the attitude towards saving money. We
can also quote the education, free time and agreement activities, the attitude for quality products, domestic migration, immigration, ethnic minorities, the environmental protection, etc. [3]
We have to stress that these factors are acting differently depending on the business activity, market particularities, products and services offered by the company to its consumers.
Contemporaneous demographic changes, expressed by the decrease of birth rate and the increase of mortality; the number of families and the trend; life expectancy; structure population by gender, age groups etc. had a major influence on the market development, the consumption structure and geographical division of the markets. Developed countries are now facing a decrease of birth rate and a continuous and significant population ageing trend correlated with a rapid increase of life hope. These tendencies create important imbalances between age categories and the appearance and development of a significant share of the elderly population. This situation has important consequences in changing the life style, the habits and, finally, the level and structure of demand for goods and services.

2. SOCIOCULTURAL ENVIRONMENT ANALYSIS

Demographic Aspects
According to the United Nation Organizations statistics, the world population is going to increase by 6.7 billions in 2007 to 9.4 billions in 2050. [http://info.worldbank.org/etools/docs/library/48424/m1s3bongaarts.pdf]
The Population Reference Bureau's (PRB) statistics informs that global population rose to 6.9 billion in 2010, and that in 2011 world population will reach 7 billion, just 12 years after reaching 6 billion. The same statistics also present that one hundred years ago, at the beginning of the 20th century the entire world population was less than 2 billion people.
The Population Reference Bureau's 2010 World Population Data Sheet highlights the fact that there are important contrasts between poor, developing and developed countries. Actually, in the most populated countries, China and India, there are more then 2.5 billions inhabitants living, representing 36.7% of the world population.
The most populated countries are presented in Table number 1.

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>POPULATION (mil.inhabitants)</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>1.338,1</td>
</tr>
<tr>
<td>India</td>
<td>1.188,8</td>
</tr>
<tr>
<td>United States</td>
<td>309,6</td>
</tr>
<tr>
<td>Indonesia</td>
<td>235,5</td>
</tr>
<tr>
<td>Brazil</td>
<td>193,3</td>
</tr>
<tr>
<td>Pakistan</td>
<td>184,8</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>164,4</td>
</tr>
<tr>
<td>Nigeria</td>
<td>158,3</td>
</tr>
<tr>
<td>Russia</td>
<td>141,9</td>
</tr>
<tr>
<td>Japan</td>
<td>127,4</td>
</tr>
<tr>
<td>Mexico</td>
<td>110,6</td>
</tr>
</tbody>
</table>

Regarding the growth rhythm, there are also big contrasts due to different birth, mortality rate, and life expectancy. For example, PRB, comparing Ethiopia and Germany, two countries having almost the same population size today, estimate that: [www.prb.org/Publications/Datasheets/2010.html]
- Ethiopia is projected to more than double its population from 85 million today to 174 million in 2050.
Germany's population will likely decline from 82 million to 72 million over that same time. The cause of these enormous differences is lifetime births per woman. Ethiopia's total fertility rate of 5.4 is four times greater than Germany's rate of 1.3.

Table no. 2 Comparative Demographic Evolution Analysis
[http://www.nationsonline.org/oneworld/world_population.htm]

<table>
<thead>
<tr>
<th></th>
<th>Germany</th>
<th>Ethiopia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population mid-2010</td>
<td>82 million</td>
<td>85 million</td>
</tr>
<tr>
<td>Population 2050 (projected)</td>
<td>72 million</td>
<td>174 million</td>
</tr>
<tr>
<td>Percent of population below age 15</td>
<td>14%</td>
<td>44%</td>
</tr>
<tr>
<td>Percent of population ages 65+</td>
<td>20%</td>
<td>3%</td>
</tr>
<tr>
<td>Elderly support ratio (2010)</td>
<td>3</td>
<td>17</td>
</tr>
<tr>
<td>Elderly support ratio (2050)</td>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>Lifetime births per woman</td>
<td>1.3</td>
<td>5.4</td>
</tr>
<tr>
<td>Annual births</td>
<td>650,000</td>
<td>3.3 million</td>
</tr>
<tr>
<td>Annual deaths</td>
<td>840,000</td>
<td>1 million</td>
</tr>
<tr>
<td>Life expectancy at birth</td>
<td>80 years</td>
<td>55 years</td>
</tr>
<tr>
<td>Infant mortality rate (per 1,000 live births)</td>
<td>3.5</td>
<td>77</td>
</tr>
<tr>
<td>Annual infant deaths</td>
<td>2,250</td>
<td>250,000</td>
</tr>
</tbody>
</table>

These differences are also related to the access to the medical products and health services. In this context, PRB stress the fact that 40 percent of the world population, or more than 2.7 billion people, lack access to an adequate sanitation and medical facility. Only 40 percent of people in rural areas in these countries have access to sanitation. In the mean time, developed countries are continuously increasing their expenses for medical services.

As for developed countries population will remain almost constant, approximately 1.2 billions inhabitants, due to the immigration phenomenon, estimated at 2.3 million persons/ year, which is going to cancel the deficit of the birth rate. At the same time, we consider that these countries will be strongly affected by the population ageing as result of the continuous increase of the life expectancy and of the birth rate decrease.

Data provided by National Institute of Statistics show that the population of Romania has registered a continuous and dramatic reduction (from 23,206,720 in 01.01.1990 to less than 21.5 million at 31.12.2009, recent statistics). The evolution of the population in 1990-2009 is represented in figure number 2. [processed data - www.insse.ro]

According to the international statistics, Romania’s population will decrease continuously, reaching in 2050 16.5 million, of which more than 50% will have over 60 years. In these conditions, each person active will pay social security and health for nine retired people. [7]

Actually, from the 21.6 million inhabitants, 10.5 million are adults; 5 million are children and 6 million elderly.
Regarding **the incidence of certain diseases**, Romania is considered actually on the first place in Europe in terms of deaths caused by heart attack and cerebral accidents. While in Western Europe cardio-vascular disorders and diseases are the most frequent health problems regarding their incidence (35-37%), being followed by cancer, car accidents, pulmonary disorders in Romania cardio-vascular diseases represent 63%, reflecting a serious national health problem. So, of 10 adults over 6 are suffering from various cardiovascular diseases.[ processed data - www.who.org]

Also, Romania is situated on the first places in Europe to chronic respiratory diseases incidence (approximately 1 million people suffering from asthma, i.e. 6-7 percent of the adult and 10-11 percent of children), and the cases of illnesses with tuberculosis (in 2005 being registered a number of 128 TBC patients/100,000 inhabitants).

500,000 Romanians (2,25 % of the patients of Europe) suffer from diabetes and more than 206,000 persons are registered with chronic psychiatric diseases (rate annual of growth 15 %).

In this context, Romanian needs a coherent and continuous National Health Program focused on treatment and prevention for these health priorities.

**Residence Area**

Residence area has an important influence on the level and structure of the pharmaceutical products consumption. According with statistics provided by Cegedim market research company, in 2010 the consumption of drugs in major cities has increased with 8.3% comparing with 2009, while in small towns and rural areas consumption of medicines decreased with 18.2%. [processed data - www.repmed.com]

According to the same research:

- more than 50% of the pharmaceutical market is concentrated in large cities with over 250,000 inhabitants;
- 27% of pharmaceutical market is the medium cities, between 50,000 and 250,000 inhabitants;
- small towns and villages represents only 18% of the drug market.

On the other hand, we have to mention that 60% of the population (living in small towns and rural areas) consumes 18% of the pharmaceutical market, which indicates a problem of accessibility to drugs. This problem is due to the financial situation of the inhabitants, but also to the lack of pharmaceutical points in rural areas correlated with a lack of prescribers and medical centers.

**Education, culture and age**

Education, culture and age have an important influence on the attitudes and habits concerning health services and drug consumption.
Regarding the attitudes and habits concerning health services and drug consumption, a study conducted by Daedalus, a consulting-marketing and research company, on 1,072 subjects aged between 18 and 65 years, from urban and rural areas, has identified the following aspects:

- Romansians adopted rather a passive attitude regarding health maintaining and prevention. Thus, only 52.4% of the subjects have respected a normal life and sleep program, 51.9% have had regular meals, while less than half of them (45.2%) have kept a diet balanced during the last 12 months.
- Almost one of three Romansians have done regular medical controls (31.0%) and about 29% are doing physical exercises (jogging/fitness/sport) or have followed a health diet (28.3%).
- People aged over 50 years are more preoccupied by prevention and health preserving comparing with other age categories.
- Physical-exercises (jogging, aerobic, fitness) appear to be the prerogative of young people up to 30 years;
- There aren’t any differences regarding regularly vitamin consumption between different age categories;
- Persons aged between 50 and 65 years are more interested in all kind of activities for health prevention and maintaining.
- There are not significant differences between women and men regarding life program and diet. However the men are more preoccupied than women by regular meals and physical exercises, while women are most interested by following regularly vegetarian diets, due to religious aspects, too, and vitamins and minerals consumption as main methods for health maintaining.

Another study based on 954 persons, aged between 18 and 65 years from urban and rural areas was focused on the particularities of consumer behaviour regarding over-the-counter (OTC) medicines and antibiotics. The study allowed obtaining information on the main pharmaceutical products bought and consumed on the romanian market, the main motivation for choosing these products, the place where they were purchased, etc.

Regarding the OTC medicines consumption, the market research has identified the following aspects:

- Even they don’t need, romanian people use to stock at home small quantities of drugs “just in case”. Romanian peoples buy most frequently and they usually have the tendency to create small domestic stocks of certain drugs against: cold and flu (84.8%), headaches (84.1%), stomach and digestive disorders (45.3%), sour throat (38.9%), antirheumatic, muscles and bone pains (37.5%) and cough syrups (28.4%).

- Stocking small drugs quantities at home is directly related with the net revenue per each family member, education degree, age and residence area.
- People with higher education buy and stock more drugs against headaches (90.9% compared to 84.1% average), and against stomach and digestive problems (62.7% compared to 45.3% average).
- Drugs against rheumatic, muscle and bones pains are frequently bought and stocked at home by retired and people aged over 45 years, cough syrups. People having a medium income superior to 200 euros/family member buy and keep small drug deposits more than people with a smaller income per family member (39.0% to 28.4% average).

We can also stress the fact that people living in big cities are buying and stockig at home more than the other living in rural areas or small towns. For example, people living in Bucharest buy and deposit at home drugs against stomach and digestive diseases (55.6% to 45.3% average), and against headaches and sour throat (48.3% to 38.9% average).
The most frequently bought drugs on the Romanian market are those against flu and cold (60.8 percent) and headaches (56.5 percent), stomach and digestive diseases (21.9 percent), for throat pains (21.0 percent), against rheumatic, muscle or bone pains (20.4 percent) and cough syrups (15.4 percent). Generally, women buy medicines more than men (84.5 percent to 75.5 percent).

In choosing OTC drugs Romanians take into account by the following aspects: [http://www.daedalus.ro/health/attitudes_eng.pdf]

- The doctor prescription drug case against rheumatic, muscle and bones disorders (40.8 percent), drugs against stomach and digestive problems (35.4 percent) and cough syrups (32.4 percent). Also, doctor’s advice is more important for small towns inhabitants (less than 10,000 inhabitants) than for big cities ones.
- Pharmaceutical chemist advice is also important for choosing drugs against rheumatic, muscle and bones problems (29.5 percent), cough syrups (24.9 percent) and digestive and stomach diseases (24.4 percent).
- Personal or family members/entourage experience is very important for choosing drugs against cold and flu.

Regarding the antibiotics consumption, products which usually require a medical prescription, doctors prescribe a certain antibiotic according with; [http://www.daedalus.ro/health/attitudes_eng.pdf]

- the availability in hospital pharmacy;
- the previous experience and use of the recommended drug
- the drug price;
- the possibility to involve the doctor and the hospital in clinical tests;
- the administration recommendations.

The choice of drugs is also significantly influenced by the offer and drug availability at that time in the hospital pharmacy. This offer is also highly influenced by hospital budget and represents a strong limitation regarding the medical treatment.

The study highlights that the subjects select the medication according the product origin. For example, Romanian drugs are prescribed in incipient stages of the infections, and foreign drugs are recommended for severe cases whereas their quality confers on them, according with the perception of subjects, a high treatment efficiency. Among foreign companies the most preferred medicines are produced by Western companies to those of oriental origin.

3. PHARMACEUTICAL MARKET EVOLUTION AND PERSPECTIVES

According "International Medical Statistics", global market of pharmaceutical products registered during the last twenty years a continuous growth rate. This growth is the result of the increase of the world population, accompanied by the accentuation of the phenomenon of the population ageing.

Among the markets which registered a high growth rate are India and China, country where lives actually 36,18 % of the world population (over 2,5 billions inhabitants). [processed data - www.who.org]

The Indian market knew one rate of important growth of 17,4 % (7,3 billions USD) thanks to a considerable increase of the population and to a high rhythm of the economic development during the last years. In China, as result of the campaign initiated by the Chinese government for the limitation of drug consumption, the market registered a decline from 21 % growth rate in 2005 to 12,3 % in 2009. [6]

The international statistics consider that for the future the pharmaceuticals market will continue to increase. Among the most importing factors which are going to determine this growth are: the increase of the world population, the considerable budgets of the health, the development of the new products and technologies, ageing continues of the world population and the economic development of underdeveloped countries and in the process of the development.
Pharmaceuticals market in Romania has registered a superior growing rhythm comparing with international market trend (12.5% comparing with 8.7% the world pharmaceutical rhythm in 2010). This situation could be explained by a dramatic decrease of Romanian population during 1990-2010, as a result of a birth rate reduction phenomenon and an intense migration process. This phenomenon appears also as a result of increasing drugs consumption per capita due to the population ageing trend, increasing of life expectancy, healthcare systems improvement and the attitude changes regarding health protection and prevention as result of the intensifying campaigns of education and prevention organized among population. As a result, the consumer behavior regarding pharmaceuticals health services registered important changes during last years.

It should be emphasized that this high rate of growth was achieved even Romania has passed a period characterized by a dramatic economic recession materialized by an important decrease of health budgetary expenses.

Taking into account these aspects, we can appreciate that the demographic changes, the high incidence of certain diseases and the significant changes of consumer behavior are going to determine in the next years an increase of the volume and total value of pharmaceutical products consumption.

The forecasts announce that for the period 2011-2015 the market volume will increase constantly in rhythm of 15 % per year and that in 2011 the pharmaceutical market will triple its volume (15.000 millions RON reported to 5.175 millions RON in 2006). [5]

The evolution of Romanian pharmaceutical market is presented in the table no. 3.

<table>
<thead>
<tr>
<th>Table no. 3 Romanian pharmaceutical market evolution [ processed data - <a href="http://www.who.org">www.who.org</a>]</th>
</tr>
</thead>
<tbody>
<tr>
<td>currency</td>
</tr>
<tr>
<td>-------------------</td>
</tr>
<tr>
<td>Total Market</td>
</tr>
<tr>
<td>Drug Consumption/inhabitant</td>
</tr>
<tr>
<td>% GDP</td>
</tr>
</tbody>
</table>

At the same time, due to an intensification of education and prevention campaign, the structure of the consumption will change. For example, for the period 2009-2011 tablet and the pharmaceutical capsules will have a growth rate higher than the other pharmaceutical forms (figure no. 4). [2]
CONCLUSIONS

In conclusion, we can appreciate that demographic, social, cultural and economic environment will determine an important development of Romanian pharmaceutical market, which will register a superior growth rate comparing with European countries.

In addition, it is estimated that for the next years, the population of Romania will become more and more responsible and will pay more attention to prevention and early treatment of diseases, thanks to campaigns initiated by different organizations and agencies, which will determine a permanent and constant growth of pharmaceutical market.

REFERENCES