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## **THE ANALYSIS OF INFLUENCE OF MACROENVIRONMENT'S FACTORS TO THE PHARMACIES' WORK**

**Keywords:** external macroenvironment, pharmacy, demographic factors, economic factors, scientific-technical factors, socio-cultural factors, ecological factors.

### **The problem definition in general and its relationship with important scientific and practical tasks.**

The organization is in a constant exchange with the external environment, thus providing the possibility of survival. The external environment is the source that provides the organization with the resources necessary to support its domestic capacity at the appropriate level. The management of the organization must analyze the influence of environmental factors in order to achieve the organization's goals and chances of survival in the long term.

### **The analysis of recent researches and publications in which started a solution to the problem.**

In the works of well-known domestic and foreign authors are identified the main groups of factors external micro and macro environment and the general characteristics of the external environment are given [4-7]. In scientific professional journals of pharmacy there are articles devoted to questions impact of components of micro- and macroenvironment to the activity of pharmaceutical organizations [1-3]. However, the studies on the evaluation of influence of external macroenvironment's factors to the work of pharmacies have a limited character.

### **The emphasis of unsolved earlier aspects of the problem, which is the article devoted to.**

There is almost no information in literature on a comprehensive approach to analyzing the influence of external macroenvironment's factors to the work of pharmaceutical organizations, from the selection of macroenvironment's factors to evaluation their influence and taking into account these data in further activity of pharmaceutical organizations.

The aim of the work is to study the scientific and practical approaches to evaluating the influence of external macroenvironment's factors to the pharmacies' work.

The methods of expert estimations, statistical and graphical were used in the study.

### **The exposition of main material with argumentation of the obtained scientific results.**

Pharmacies are functioning in interrelation with external environment. The external environment is diverse and variable. The pharmacy's managers should limit accounting of external environment only those aspects of which depends largely the success of the organization. One way to identify and take account of factors that affect the organization, is the division of them into two groups: direct (microenvironment's factors) and indirect influence (macroenvironment's factors).

Among the macroenvironment's parameters are the most important demographic, economic, political, ecological, scientific-technical and socio-cultural factors. The macroenvironment's factors are somehow related to the definition of the potential risks in the implementation of business and readiness of pharmaceutical organizations to overcome them. Analysis of macroenvironment's factors can also identify new opportunities for development. In any case it is the best adaptation of the organization to formed conditions of business [1].

Before we analyzed the influence of macroenvironment's factors on the activity of pharmacies, the information has been investigated and worked by us about basic tendencies of the pharmaceutical market, affecting the operation of pharmacies. To do this, pharmacies managers appreciated list of proposed parameters for the 10-point scale. The respondents identified among the main factors affecting the functioning of pharmacies: the improving the quality of services (8,7 points), expansion of assortment of goods (8,7 points), service improvement (8,7 points) and increasing competition from other pharmacies (8,1 points).

While working to achieve this goal, a survey of managers of pharmacies was carried out. There were 390 questionnaires received and analyzed. As a result of research differentiated the influence of the macroenvironment's factors to the work of pharmacies. After processing the questionnaires it was found that 57% of pharmacies whose managers were interviewed, working independently, 39% – in the pharmacy network and 4% – in the wholesale and retail associations. It was determined that the majority of pharmaceutical companies whose managers interviewed are private, of which 86% of pharmacies are located in cities, 14% – in rural areas. Contingent of service surveyed pharmacies constitute: 26% – workers, 25% – employees, 24% – pensioners, 18% – students and 7% other groups; thus contingent of pharmacies represented different population groups.

To analyze the influence of the macroenvironment's factors to the work of pharmacies respondents were asked to provide expert opinions for each group of the macroenvironment's factors on a scale of -3 to +3. In this case, expert assessment from -3 to -1 indicates a negative influence of factor for functioning of pharmacy, 0 – factor does not influence the activity of pharmacy, from +1 to +3 indicates a positive influence of factor. After the processing of data, a percentage value to each factor of specific group macroenvironment was calculated, it is presented in table 1.

Demographic factors have significant influence on the activity of pharmacies, because they determine the portrait consumers of medicines and products of medical purpose, employees, partners, competitors, etc. The demographic factors were analyzed by us, which are listed in the table. 1. This analyze allows making following conclusion: the greatest positive influence on the activity of pharmacies commit the factors «the aging of the population» and «changes in the level of birth rates,» respectively 61,6% and 53,6% of positive evaluations. This is due to the fact that the factor of «the aging of the population» leads to an increasing number of elderly people, and therefore an increasing the number of consumers of pharmacies, the pharmacies have to consider this tendency when planning the optimal assortment of medicines. A positive assessment by pharmacies the component «changes in the level of birth rates» indicates an increase in demand for medicines and products of medical purpose for consumers, and therefore requires expansion of medicines assortment in children forms, hygiene for kids, children's cosmetics. Thus, the needs of the segment of children's contingent's of consumers seek to satisfy the needs and enhance the competitiveness of pharmacy.

**Table 1. Estimation of degree the influence of macroenvironment's factors on the activity of pharmacies**

Factors	The degree of influence, %						
	-3	-2	-1	0	+1	+2	+3
1	2	3	4	5	6	7	8
<b>DEMOGRAPHIC FACTORS</b>							
1. Changes in the level of birth rates	8,7	9,2	17,2	11,3	24,6	14,4	14,6
2. Migration of the population	9,5	12,8	13,3	27,2	18,8	9,2	9,2
3. The aging of the population	7,1	8,0	9,7	13,6	20,5	19,8	21,3
4. National structure of the population	5,9	4,1	6,2	40,8	20,5	11,0	11,5
<b>ECONOMIC FACTORS</b>							
1. Household income	16,9	9,2	13,6	0,8	10,0	14,6	34,9
2. The inflation rate	21,3	15,4	16,1	4,4	9,5	9,7	23,6
3. The introduction of the value added tax on products of medical purpose	19,0	10,0	22,1	13,8	11,8	11,0	12,3
4. The rise in the price level	21,0	15,4	15,1	2,6	7,7	13,6	24,6
5. Structure of acquisitions medicines	5,1	8,5	13,3	21,0	24,9	11,5	15,7
6. Terms of receiving credit	14,9	10,0	12,6	34,9	12,8	7,4	7,4
7. Changes in exchange rates	21,8	16,1	17,4	8,0	10,0	11,0	15,7
8. The unemployment rate	23,6	14,6	15,4	7,7	12,8	9,0	16,9
9. Ukraine's accession to the World trade organization	7,4	6,2	14,6	41,0	18,5	7,2	5,1
10. The growth of gross domestic product	4,4	3,8	11,0	23,3	26,2	17,7	13,6
11. Development of medical insurance	5,6	2,8	8,0	30,5	23,6	17,2	12,3
<b>ECOLOGICAL FACTORS</b>							
1. Contamination of the environment	7,1	10,8	19,5	22,1	14,4	12,5	13,6
2. Change the value of energy and natural resources	17,2	19,0	21,5	11,5	13,6	7,7	9,5
<b>SCIENTIFIC-TECHNICAL (TECHNOLOGICAL) FACTORS</b>							
1. The emergence of new technologies for production medicines	2,1	2,3	4,4	15,6	34,9	23,0	17,7

Extension table. 1

1	2	3	4	5	6	7	8
2. The appearance of the original medicines	1,3	2,3	2,8	6,9	30,0	35,1	21,6
3. The level of technology of medicines	2,3	0,8	6,2	12,6	28,4	32,0	17,7
4. The computerization enterprises of the branch	1,5	1,5	3,1	5,9	19,5	28,5	40,0
5. Information support of enterprises	1,0	0,8	3,3	4,4	20,0	31,0	39,5
6. The share of skilled and professional staff among workers in the field	0,5	2,5	1,3	2,8	24,1	24,4	44,4
7. Strengthening of state control over the purity and safety of products	3,6	4,1	6,9	11,5	27,2	23,6	23,1
8. Development and implementation of service standards in the enterprises of the branch	6,2	5,1	8,7	11,8	22,8	25,6	19,8
9. Implementing rules GPP (Good pharmacy practice)	7,4	6,2	9,2	12,3	25,1	20,0	19,8
<b>SOIOCULTURAL FACTORS</b>							
1. Social factors (social status, family traditions in treatment, morbidity, availability of information to the population)	0,8	3,3	5,6	7,9	32,1	27,2	23,1
2. Factors cultural order (social status, culture, advertising campaigns)	0,5	2,6	6,9	5,4	29,5	33,6	21,5
3. Personal factors (age of family, occupation, economic status, lifestyle)	1,0	2,1	5,4	8,5	31,0	28,7	23,3
4. Psychological factors (motivation, perception, learning, beliefs and attitudes)	1,0	2,3	4,6	10,5	28,7	26,7	26,2

43% of managers assessed positively influence of the factor «national structure of the population.» For pharmacies is appropriate taking into account the needs of people of different nationalities in the assortment's policy, service and quality customer service.

Migration of the population provides for territorial population movements associated with changes in their place of residence. Migration of the population assessed approximately the same share of negative (35,6%) and positive (37,2%) assessments. This factor has a positive effect to the activity of pharmacies in the southern region, including Odessa and Crimea because the significant increase in the number of consumers observed during the summer season and accordingly, increased commodity turnover of pharmacies. These pharmacies should to expand the assortment and create stocks of antibacterial remedies for the treatment of acute respiratory viral infections, antidiarrhoeal remedies, antiseptics, etc.

The influence of economic factors on the activity of pharmaceutical companies is presented in table. 1. The highest share of positive assessments given the following factors: structure of acquisitions medicines, the development of medical insurance, the growth of gross domestic product. The respondents attributed to destabilizing factors, which evaluated a large proportion of negative evaluations, changes in exchange rates, the unemployment rate, the inflation rate, due to the unpredictability and difficulties of forecasting and planning of pharmacies' activity.

The political component of macroenvironment is investigated to study programs that try to enforce public authorities, analysis of existing in government agencies lobbies, analysis of attitudes of the government to different regions of the country, a study of possible changes in legislation and legal regulation in result of the adoption of new laws and new norms regulating the activity of economic entities pharmaceutical branch. Due to the unstable political situation in Ukraine there is a high degree of public dissatisfaction with the actions of the government. Therefore, it is appropriate to analyze the influence of political factors for functioning of pharmacies. In table 1 distribution of political factors between different groups of factors of macroenvironment made for their concretization. Thus, the influence of factor «strengthening of state control over the purity and safety of products» 73,9% of managers of pharmacies rated positively by the need to maintain the same high quality medicines to enhance their competitiveness and protection from forgeries. The negative influence of factors «the rise in the price level» and «the inflation rate», in accordance pointed 51,5% and 52,8% of respondents that have caused quite a sharp increase of prices by distributors, both for imports and for domestic medicines. More stringent become conditions of supply of goods by distribution companies: reduced the terms of deferred payment and some companies have begun work on a prepaid basis. These changes complicate the functioning and prediction of the work of pharmacies and they are forced to adapt to new conditions in order to survive in the pharmaceutical market.

Due to the unstable political situation in Ukraine, the global economic crisis, changes in exchange rates (55,3% of all negative assessments provided by respondents to this factor) is constantly increasing cost of medicines and accordingly decreases their availability to the public as at their own expense and at the expense of the state. Because of the high rate of unemployment and reduced people incomes (respectively, 53,6% and 39,7% of negative evaluations of the respondents) the solvency of the consumers greatly reduced.

Ecological factors occupy a leading position in the macroenvironment of pharmacies. The table 1 shows that the ecological environment as a whole mediated affects the activity of pharmacies. This situation is explained by the fact that the change the value of energy and natural resources (57,7% of all negative estimates) leads to a permanent increase in the share of expenditures of pharmacy for utilities. Contamination of the environment 37,4% of respondents rated negatively, and 40,5% rated positively influence of this factor.

The influence of scientific and technical factors for functioning of pharmacies is the most positive influence among all investigated groups of macroenvironment factors. The uneven course of scientific and technological progress, discrepancy in space and time, the creation and use of technical innovations require consideration of pharmacies the level and tendencies of technical and technological development and how its achievements use by competitors. The positive influence of scientific and technological environment on the activity of investigated pharmacies confirmed the specific gravity skilled and professional staff among workers in the industry, pharmacies' computerization and information support of pharmaceutical companies, respectively:

92,9%, 88,0% and 90,5% of all positive estimates. Factor «implementing rules GPP» majority of respondents rated positively (64,9%) due to the need to survive in the pharmaceutical market and improve its competitiveness. However, the highest percentage of negative evaluations (22,8%) of all scientific and technical factors given to it due to lack of funds in pharmacies in the implementation of the rules GPP.

Social and cultural factors are formed within a particular society and reflect the main features of the views, values and norms of the behavior of people that influence the acceptance of managerial decisions. It is the social environment influences the formation of consumer preferences that affect the direction and size of consumer demand, and therefore the possibility of pharmacy to implement medicines and products of medical purpose. Thus, the influence of cultural factors order (social status, culture, advertising campaigns) and personal factors (age of family, occupation, economic status, lifestyle) marked the highest number of positive evaluations, respectively, 84,6% and 83,0%. The respondents positively evaluated the influence on pharmacies of social factors (social status, family traditions in treatment, morbidity, availability of information to the population) and psychological factors (motivation, perception, learning, beliefs and attitudes) because consumers – representatives of different generations, and therefore are carriers of various socio-cultural experience. There are certain features of consumer choice of OTC-medicine for their own use: an important role plays previous experience of application, and recommendations of doctors fades into the background; if the medicine acquired for the child then doctor's appointment is crucial.

Analyzing and consideration of factors of macroenvironment is a very important process for survival pharmaceutical organization in modern conditions requiring watchful monitoring, impact assessment of factors and establishing links between factors, and the opportunities and threats that make up the macroenvironment.

Thus, the results obtained at this stage of the research allow concluding that the study of the influence of factors external macroenvironment is an integral part of successful activity of pharmacies.

### **Conclusions:**

1. The tendencies of the pharmaceutical market, influencing the activity of pharmacies have been analyzed.
2. The main components of the macroenvironment's factors pharmacies that may affect in future at ensuring their competitiveness have been dedicated.
3. The degree of influence of factors of external macroenvironment on the activity of pharmacies has been defined.

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