# PHARMACY FRANCHISES' STRUCTURAL SPECIFICS IN THE NATIONAL PHARMACEUTICAL MARKET OF UKRAINE

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#### INTRODUCTION

Franchise systems of product and service distribution rightfully named as the "Business of the 21st century"<sup>1</sup> Understandably tho: analogies for franchise businesses and franchise structure of pharmacy store chains in Ukraine can be done until some but not exact degree. Yet still in current time period pharmacy chain stores can play a very crucial role in covering the needs of population regarding medicine drugs and pharmaceutical services. Also there is a need to mention that chain stores in a lot of cases become not only places to sell medicine but also a consultation centers and even learning spaces to know more about your health and how to prevent sickness.

The growth of pharmaceutical industry can be easily seen reflecting alongside with the grow of country economical and healthcare progression. With everlasting changes in healthcare department, technological progress and evolution of industry, the researches of current state of pharmaceutical chains and their perspective is a very valuable effort. It allows to better understanding of current trends, and how they influence their functionality, it also helps to create strategies to optimize it workflow in the future. Cooperation of researching processes done by different people and often companies can help in a wide spectrum of needs to be covered.

The main goal of this documented research we present is to analyse current state of pharmaceutical chain industry and to see where the perspectives of growth are leaning in. To succeed in this we done a lot of overviews which was done in areas of: learning factors which affecting this industry, learning factors which can help the industry to grow, and specific ones which is being done by specific brands. Also was seen the possible improvements which can be help to optimize the workflow, structure, and also the choice giving to the

<sup>&</sup>lt;sup>1</sup> R.Kiyosaki. Business of the 21st century. 2010. P. 142. http://dspace.vnbrims.org:13000/jspui/bitstream/123456789/2358/1/The%20Business%20of%2 0the%2021st%20Century.pdf

customer in terms of brands and amount of drugs represented by companies. With this goal in hand, we also digged in a lot of literature which can help us to understand this topic better.

We also researched key companies on the market in both sections of mass and small supply to see their strategies and how they rivaling each other. Also we tried to see new possibilities and and perspectives of chain growth including for example: new technologies, improvement of variety of choice, new methods of client satisfaction and other possible improvements.

Main point of research was: to inspect current state and perspectives of evolution of pharmacy chains. Main object of this research become the specific system of functioning which misc. systems possess on the territory of Ukraine. In this presentation you can see structure of work, researches on current state of pharmacy chain. Analyses of growing factors, possible improvements.

This research is very valuable for understanding of strategical path how to improve this system in Ukraine and whole world, of course including how to overcome different obstacles and to better understand tendencies and demand on pharmaceutical market of Ukraine.

# **1**. Theoretical and practical aspects of the national pharmaceutical industry and the current state of pharmacy chains in Ukraine

The pharmaceutical industry is among those that are actively developing. The pharmaceutical market (PR) is characterized by a large supply and demand. The question of the formation and development of the FR in Ukraine is of interest not only to drug manufacturers, representatives of pharmaceutical companies, pharmacists, but also to doctors. A lot depends on the coherence, stability and civility of the FR in medicine and society in general. Today, the state of the Russian Federation and the structure of relations between its main participants in our country have certain features that are legally regulated by the relevant legal acts. Medicines occupy the largest amount in sales volume of goods of the "pharmacy basket". A key characteristic of the Federal Republic of Ukraine today is the low level of drug consumption per capita. The formation of the Ukrainian FR takes place under the influence of state policy in terms of providing consumers with affordable drugs, and also testifies to the fierce competition in the field of production, distribution and consumption between domestic and foreign manufacturers of pharmaceutical products, pharmacy trade networks, pharmaceutical distributors in terms of the sale of medicinal products (LP) and pharmacies<sup>2</sup>. FR covers the means used for the treatment, prevention and diagnosis of diseases. Depending on

<sup>&</sup>lt;sup>2</sup> Шандрівська О. Є., Цветковська А. В. Дослідження фармацевтичного ринку України: у фокусі концентрація ринку. Вісник Національного університету "Львівська політехніка". Серія "Проблеми економіки та управління". 2022. № 1 (9). С. 56–68.

the regulations legally adopted in each country, medicines and medical products are sold by pharmacies, hospitals, doctors and/or pharmacies, and/or they can be purchased at other points of sale.

So people trying to get the bare minimum of needed medicine, and every change is of course being studied under the lens, and adjusted to not only keep companies profitable but also to allow people get cure for every sickness they will have. Of course it also bringing a lot competition between companies not only from Ukraine but also from other countries trying to grab part in fast growing market. But native companies are more profitable of course due to specification of Ukrainian customer behaviuor. They choosing native medicine products (especially generics) because of their price compared to same medicine but from across the border. Also with the thought to get rid of a lot of old varieties of medicine Ukraine got a huge growth in research sector. That bring out a tendency to digitalization and growth and therefore improving amount of internet pharmacies which offer people even more cheaper and more convenient way to buy medicine.

One more specific of Ukrainian market is the fact that a lot of people are of older age and research showing expectance of raised demand for medicine due to chronical diseases and the way they need to be treated. Because of that Ukrainian government created a couple of acts which helping national pharmaceutical sector grow even better. (Most of them being lower tax amount and money help to the growing companies)

We need to take into account also that there is a macro factors that affects pharmacy sector. Before the Russian invasion of Ukraine a lot of parts of the economy had a lot of growth due to international investments. Of course it was widen the variety of what people can allow themselves, and more expensive medicine and medical services was a valuable part of it.

Also do not forget about very good territorial placement for Asian and European countries to expand on more wide markets. (Asian to European and European to Asian)

Ukrainian market is one of the most dynamic markets due to places on occupied territories are being destroyed and companies trying to open a new one instead of them. After opening in 1995 one of the oldest and most represented pharmacy chain in Ukraine "Med Service" now have almost 320 stores in 109 cities in every part of Ukraine which is not occupied. Of course Ukrainian market is very compelling for international investors but its only if there will be plan for it growth and safe conditions. Which will allow to see risks and benefits of investions. The important part of 2023 market in Ukraine was BAA. Bio-active Additives. It reached 8.4% of market sales almost doubled in the last five years. Main clusters of this industry can be listed as follow: native companies (Darnitsya, Arterium, Pharmak and others) Eastern European companies (KRKA, Gedeon Richter, Berlin-Chemie) new companies who making generics. (Actavis, Zentiva, TEVA, Ratiopharm,

SANDOZ) Companies innovators: (Novartis, Pfizer, Astra Zeneca) And niche companies (Mili Healthcare, Bittner, Heel and others)<sup>3</sup>. In the last three years a lot of clusters got a huge growth (The new companies, and generic manufacturers got the most of it) on the other hand the niche and innovative clusters not get any significate improvements since 2004.

Main factors which helping native companies rise are low prices and positive expectance and trust from the interviewed people to native brands<sup>4</sup>. But on the flipside myphs that medicine from Ukraine is outdated due to old soviet standarts of making it, and not enough marketing experience (which international gigantic companies taking advantage of) created the flare of people not trusting it enough.

Another problem is lack of internationally proofed positive test results from Native medicine is another factor why even Ukrainians prefer well known company products. Generical companies are getting their share because they making drugs which needed in that specific moment in time and in a lot of cases are putting product on shelfs even faster then a lot of gigantic companies. That even help them to grab a piece of pie from innovative companies because they showing that medicine and the way it working to a customer firsthand. On the flipside they need to advertise every new brand they are making. And its their losing side vs huge companies with decent budget. Therefore every cluster is in constant melting pot of competing with each other and more depend on personalities who ruling them and time/situation plus of course money coming from investors more then actual usual marketing practices<sup>4</sup>.

Financing of Pharmaceutical market is one of the most important factors that deciding stability and growth of this sector. It can most likely come from the wallet of the customer. The main instruments here are the Reimbursement Programme (state co-financing) or the co-payment mechanism (patient participation in the payment for pharmacotherapy) and voluntary health insurance. As for medicinal products, not only sales volumes but also the structure of the market itself have changed over the past few years due to the impact of the COVID-19 pandemic. Until 2022, sales of medicines used to treat coronavirus disease grew at a faster pace, with a significant increase in the consumption of antithrombotic drugs. In 2020, Farmak, Darnitsa and Teva became the leaders in sales of medicines and dietary supplements, and in 2021, Farmak, Darnitsa and Sanofi (France) became the leaders in sales of medicines.

<sup>&</sup>lt;sup>3</sup> Mann M.V., Popkin D.L. Handbook of Dermatology: A Practical Guide. Wylie-Blackwell. 2019. P. 259. https://www.wiley.com/en-us/Handbook +of+Dermatology%3A+A+Practical+Manual%2C+2nd+Edition-p-97811184085205.

<sup>&</sup>lt;sup>4</sup> Polevoy G.G., Sablin A.B. Development of coordination abilities with the help of the burpee exercise. International Journal of Pharmaceutical Research & Allied Sciences. 2022.11(1). P.108-12. https://doi.org/10.51847/eYLjcMBn9G

The outbreak of hostilities on 24 February 2022 almost paralysed the Ukrainian pharmaceutical industry. According to the experts of the Ukrainian pharmaceutical industry, Darnitsa JSC, only 10% of pharmacies were operating in the country in the first days of the fighting. However, already on 24 March 2022, about 80% of pharmacies started working again in completely new realities<sup>5</sup>. Due to the logistical chaos on the western borders and the blockade of seaports, imports of certain medicines were suspended for several months. At the same time, the share of the hospital segment of the pharmaceutical market, which in peacetime ranged from 7.5% to 8%, increased to 40%. These months were challenging for Ukrainian pharmaceutical companies. A few months before all hell broke loose on Ukrainian soil, one of the local players in the FD market, Farmak, invested in a nebulised drug production line at its plant in Kyiv. The company launched the line 'to the roar of Russian cannonade during the fiercest fighting' near the Ukrainian capital, the company said. The foreign engineers who were supposed to commission the equipment refused to come to Ukraine due to security concerns, and Farmak employees had to perform this task on their own. Darnitsa did not stop working even for a single day, even when the enemy was on Kyiv's doorstep, said Vasyl Hubarets, Corporate Communications Director of Darnitsa, explaining that this was primarily due to the successfully implemented automation and digitalisation programmes<sup>6</sup>.

As a result, a significant number of office workers switched to remote work. Another major market player, Arterium JSC, suspended the operation of its Kyivmedpreparat near Kyiv until mid-March to ensure the safety of its employees. Meanwhile, Galichpharm's second plant near Lviv, in the west of the country, continued to operate. Investment activity in the industry resumed around April 2022, when Russia withdrew from Kyiv, Sumy and Chernihiv regions. Farmak's CEO Volodymyr Kostiuk estimates that the company launched at least 11 new drugs last year and does not plan to slow down. Darnitsa maintained its pace and launched at least 15 new medicines<sup>7</sup>.

The military operations have significantly shifted the focus of Ukrainian pharmaceutical companies working to meet the growing needs of the military. In addition, Darnitsa has started to produce potassium iodide tablets, which can be used in the event of a nuclear accident. It has proved to be in great demand among Ukrainians, some of whom live in constant fear of a disaster at the Zaporizhzhia NPP, Europe's largest, located near the battlefield in territory currently controlled by Russian forces. Some Ukrainian companies are also considering investments in foreign assets. Farmak, for example, has

<sup>&</sup>lt;sup>5</sup> Аптека. online.ua. https://www.apteka.ua/article/631700

<sup>&</sup>lt;sup>6</sup> ПрАТ Фармацевтична компанія «Дарниця». https://darnytsia.ua/press-center/novini-kompan/darnitsya-zaprovadzhuie-tsifrovizatsiyu-sistemi-upravlinnya-personalom

<sup>&</sup>lt;sup>7</sup> Forbes Ukraine. https://forbes.ua/news/darnitsya-vipuskae-novi-liki-popri-viynu-farmkompaniya-zapustila-u-prodazh-15-preparativ-z-pochatku-roku-21102022-9204

invested  $\notin$ 20 million in a new factory near Barcelona for the production of solutions, suspensions in vials and syringes, which is due to start operating in 2024<sup>8</sup>.

The CMU Resolution 'Some Issues of Emergency State Registration of Medicinal Products, Medical Immunobiological Products, Blood Products Manufactured or Supplied to Ukraine during the Period of Martial Law, under Obligations' played a significant role in the development of the FR<sup>9</sup>. The CMU Resolution simplified the procedure for registration and re-registration of vital medicines.

The Ukrainian pharmaceutical market retains its position in terms of volume among Eastern European countries. The main sales structure is made up of finished medicines, various medical devices, cosmetics and dietary supplements. The market is home to a large number of different companies, which may have different forms of ownership – state-owned, private, or collective. Participants include representatives of small and medium-sized businesses and large production complexes. Various companies from other countries, including the EU, also operate in the Ukrainian market.

The main tasks of companies operating in the pharmaceutical sector are: production of medical devices and specialised medicines, other goods for the respective purposes; retail and wholesale trade; specialised storage of goods, distribution through national distribution networks (pharmacies, specialised pharmacy outlets). All sales are divided into the hospital and pharmacy segments, which are represented on the market by pharmacy chains and other specialised outlets. The majority of the retail segment is financed by the end consumer. The hospital sector is characterised by sales through state-funded healthcare institutions.

In the pharmacy sector, almost two-thirds of sales are made in Ukraine. At the same time, the largest share of foreign-origin goods is observed in the category of medicines and dietary supplements.

Thanks to innovative approaches and systematic investment by Ukrainian companies in their own production, Ukrainian generic medicines partially replaced imports in the pre-war years. The chain of distribution and sale of medicines to the public is similar to most consumer goods and includes the following links: manufacturers; distributors; retailers – pharmacies and pharmacy outlets. Each individual retail pharmacy is an unprofitable customer

 $<sup>^{8}\</sup>mathrm{AT}$  «Фармак». https://farmak.ua/news/ukrayinskih-likiv-u-evropi-stane-bilshe-farmak-budue-zavod-v-ispaniyi/

<sup>&</sup>lt;sup>9</sup> Постанова КМУ «Деякі питання екстреної державної реєстрації лікарських засобів, медичних імунобіологічних препаратів, препаратів крові, що виробляються або постачаються в Україну протягом періоду дії воєнного стану, під зобов'язання» URL: https://www.kmu.gov.ua/npas/deyaki-pitannya-ekstrenoyi-derzhavnoyi-reyestraciyi-likarskihzasobiv-medichnih-imunobiologichnih-preparativ-preparativ-krovi-shcho-viroblyayutsya-abopostachayutsya-v-ukrayinu-471

for the manufacturer due to small volumes of supplies, which is why pharmacies purchase drugs and medical devices through intermediary companies. At the same time, retailers do not have the opportunity to study all available price lists from manufacturers to select the required range of medicines, price offers and delivery terms. There are also no guarantees of availability of specific medicines, and in some cases, transaction and delivery costs may be high for an individual pharmacy. However, direct contracts between large pharmacy chains, which are the structural unit of pharmaceutical wholesaler intermediaries, and various pharmaceutical industrial manufacturers are typical. In order to select among possible suppliers in the pharmaceutical market, the following algorithms should be applied: selection (search and screening) of manufacturers; regional representative offices of foreign manufacturers; importing companies; and enterprises engaged in wholesale trade of medicinal products. The activities of distributors are an important link in the supply chain of the Ukrainian pharmaceutical market. Pharmaceutical distributors play a key role and have a direct impact on shaping the market structure and increasing the turnover of medicines and CF. In EU countries, this component is included in the turnover of pharmacies, while pharmaceutical distributors act as logistics operators. At the same time, due to economic instability and high level of competition, Ukrainian wholesale companies are forced to create sales channels and actively conduct various marketing activities to increase sales.

Taking into account the specifics of the economic situation in the Federal Republic of Ukraine and the development of its individual segments, the main types of competition and factors of influence can be identified. There is competition between national and foreign manufacturing companies, as well as global leaders in the pharmaceutical industry, which have the potential to enter the market, dynamic development of enterprises in related industries and other areas, the strategic development of which involves the involvement of some pharmaceutical products in the market. There is pressure from substitute product groups, competition from original or generic medicines and biological supplements. In addition, there is a high level of competition in the sector of logistics supply chains for medicines and medical devices, competition for dominance in the pharmacy and hospital segments, and the ability to represent one's own interests in the distribution channels of medicines at different levels of influence. Competition at the wholesale and retail level is also pronounced. Pharmacy chains owned by wholesalers are being formed. There is financial pressure on the part of pharmacies represented in the form of wholesale organisations, which significantly expands and complicates competition in the market. There is also pressure from end users, who, thanks to access to relevant information, have gained knowledge of the features of modern pharmaceuticals and can turn to a wide range of medical (pharmaceutical) services market players, including the consulting sector. The latter is driven by the development of private offices and the introduction of e-services, including the introduction of e-prescriptions. Of course, the further development of the industry directly depends on the current situation in the country, the speed of post-war recovery and the interaction of the state with the segment representatives.

As for the peculiarities of legislative regulation of requirements for premises and buildings where pharmacies, pharmacy warehouses and other healthcare facilities may be located, they are strictly regulated in Ukraine (Resolution of the Cabinet of Ministers of Ukraine 'Some issues of emergency state registration of medicines, medical immunobiological products, blood products produced or supplied to Ukraine during the period of martial law, under the obligation'<sup>10</sup><sup>11</sup>. Regardless of whether it is a new building, a refurbishment of an existing building, a central pharmacy or a healthcare facility pharmacy, the goals are the same, only the means differ. Functional premises should be designed in such a way as to ensure: reliable storage of stocks; proper storage of medicines and consumables; and efficient and easy management. The size of the warehouse is determined by the storage needs, which depend on: the number of medicines and consumables to be stored; the number and activities of the facilities; the frequency of distribution and administration: the lower the frequency, the greater the volume required, and therefore the more space needed. Certain aspects must also be taken into account: stock security requires secure doors, locks, windows and ceilings; proper storage of medicines depends on temperature and humidity, conditions that are often difficult to control in tropical countries; proper ventilation is necessary; fans mainly reduce humidity, air conditioning reduces heat and humidity; a ceiling under the roof is necessary to reduce ambient temperature; the space between the ceiling and the roof must be ventilated; windows and openings must be shaded to avoid direct sunlight from reaching the medicines. The organisation of the warehouse should be logical and comply with the 'receiving, storage, distribution' scheme.

In terms of equipment, metal structures are preferred because they can be dismantled and the space between shelves and alleys can be easily adjusted to better accommodate the goods for storage. The space between shelves and walls improves ventilation. Medicines, drugs, medical devices and ancillary materials should not be stored on the floor, but only on pallets that allow air circulation and protect against moisture. The warehouse should have a

<sup>&</sup>lt;sup>10</sup> Постанова Кабінету Міністрів України «Ліцензійні умови провадження господарської діяльності з виробництва лікарських засобів, оптової та роздрібної торгівлі лікарськими засобами, імпорту лікарських засобів (крім активних фармацевтичних інгредієнтів)» URL: https://zakon.rada.gov.ua/laws/show/929-2016-%D0%BF#Text

<sup>&</sup>lt;sup>11</sup> Наказ Держбуду України від 4 січня 2001 р. №2 Державні будівельні норми України. Будинки і споруди. Заклади охорони здоров'я ДБН В.2.2-10-2001 URL: https://zakon.rada.gov.ua/rada/show/v0002241-01#Text

separate zoning: a receiving area (for storing goods before unpacking and quality control); a distribution area (for storing peripheral orders before distribution). Each destination should have a designated area where the collected goods can be stored before distribution.

Receiving and distribution areas should be close to doors to facilitate handling. It is also recommended to plan for a storage area for empty containers used to prepare orders for branch healthcare facilities. A workspace should be created in the receiving area and in the distribution area for checking deliveries and preparing orders.

On 1 March 2023, the new State Construction Norms (SCN) B.2.2-10:2022 came into force. Healthcare facilities. The new DBN were approved by the Order of the Ministry of Communities and Territories Development of Ukraine No. 278 dated 26.12.2022 to replace DBN B.2.2-10:2001. They apply to healthcare facilities and pharmacies. The norms will apply to new construction, reconstruction, overhaul and, in some parts, restoration. In accordance with the general provisions of the DBN (clause 4.8), pharmacies are allowed to be located in residential and public buildings subject to the following requirements: location on the street (main) facade and a separate entrance from the street; compliance with fire and sanitary and hygienic requirements; compliance with the inclusivity requirements in accordance with DBN B.2.2-40. Inclusivity of buildings and structures; distance from sports and playgrounds in accordance with the requirements of DBN B.2.2-12. Planning and development of territories; distance of open car parks in accordance with the requirements of DBN B.2.2-12 (except for parking spaces for visitors to healthcare facilities); availability of two entrance zones (the second entrance/exit is fire and evacuation): availability of a special zone for temporary parking in accordance with the requirements of DSP 173-96. State Sanitary Rules for Planning and Development of Settlements.

Subject to compliance with fire safety, sanitary and hygienic requirements, inclusiveness requirements in accordance with DBN B.2.2.40 and the working hours, it is also allowed to locate pharmacies in the basement, basement and underground floors of healthcare facilities. It should not be forgotten that a pharmacy is not only an institution for the sale and manufacture of medicines, but also a centre of sanitary culture and a centre for improving the level of medical knowledge of the population. Due to these features, pharmacies are directly subject to a wide range of preventive and current sanitary supervision measures that must be carried out on the basis of the Laws of Ukraine 'On the Public Health System'<sup>12</sup>, 'On Labour Protection'<sup>13</sup>, and 'Code of Ukraine on

<sup>&</sup>lt;sup>12</sup> Закон України «Про систему громадського здоров'я» URL: https://zakon.rada. gov.ua/laws/show/2573-20#Text

<sup>&</sup>lt;sup>13</sup> Закон України «Про охорону праці» URL: https://zakon.rada.gov.ua/laws/show/2694-12#Text

Administrative Offences'<sup>14</sup>. During the construction or reconstruction of pharmacies, preventive sanitary supervision includes: design control; participation in the selection of a land plot; control at the stage of project development; project expertise; linking (location) of the building to the selected land plot; control over the construction or reconstruction; control over the implementation of design decisions and sanitary norms and rules; participation in the commissioning of the building; sanitary expertise of new construction and finishing materials and structures.

In most cases, pharmacy facilities are built according to standard designs, although recently, construction according to individual designs has become quite common, especially in buildings undergoing reconstruction. However, projects become officially valid only after appropriate expertise and positive approvals. Pharmacy managers or investors who commission the design and subsequent construction should be familiar with the basic elements of a construction project and should be able to explain the main content of the design order. Customers should be aware of the specifics of the area and the needs of the locality for pharmacies. At the same time, it should be borne in mind that according to the Resolution of the Cabinet of Ministers of Ukraine 'On Approval of the Licensing Conditions for Conducting Business Activities for the Production of Medicines, Wholesale and Retail Trade in Medicines'<sup>10</sup>, the load per pharmacy should not exceed: in settlements with a population of up to 300 thousand inhabitants – 16–18 thousand people, from 300 thousand to 1 million – 14–16 thousand people, over 1 million – 12–14 thousand people. Such standards are directly related to occupational health and safety requirements, as overloading pharmacies with visitors and, accordingly, orders for the manufacture of prescription drugs will not contribute to the proper working conditions of pharmacy employees, and a large number of visitors will lead to a deterioration in microclimatic parameters and air quality, including bacteriological indicators in pharmacies.

Therefore, business entities, regardless of their form of ownership, must ensure that the production facilities of pharmacies and their structural units meet the necessary sanitary and hygienic conditions, as well as labour protection requirements. Accordingly, knowledge of regulatory documents, construction and sanitary rules and regulations should form the basis for organising their activities both at the stage of ordering a project and during its subsequent examination, establishing control over the construction process, as well as during the commissioning of the facility.

In accordance with the Procedure for Development, Approval and Approval of Construction Documents, the following list of project documentation should be analysed: passport part; explanatory note;

 $<sup>^{14}</sup>$ Кодекс України «Про адміністративні правопорушення» URL: https://zakon.rada.gov.ua/laws/show/80731-10#Text

architectural and construction solution (situational plan, master plan, territory improvement and, if necessary, scheme of transport interchanges); engineering and technological part (if necessary); engineering and technical equipment of external networks; assessment of the facility's impact on the environment (if necessary, determined with the participation of state authorities). When agreeing on the location of a building, the following documents must first be obtained: a decision of the executive committee or session of the local council of people's deputies on the allocation of a land plot; a land plot agreement; a design task; architectural and planning tasks; a certificate of possible connection of the building to water supply, sewage, heat supply and power grids; a technological project.

The project customer (owner/manager of the pharmacy) should be aware that the project should include a text part (passport data of each object and explanatory notes) and graphic materials that occupy the largest part of the project and should be presented in the form of: a situational plan (scale 1:5000) with all buildings and utilities adjacent to the general plan; a general plan (scale 1:500 or 1:1000) of the construction site with hydrogeological characteristics; plans of facades, floors, sections of buildings and structures with a schematic representation of the main structural and enclosing structures at a scale of 1:50, 1:100, 1:200; schematic diagrams of engineering equipment (heating, water supply, drainage, ventilation, electricity, etc.).

It should be noted that the above list of documents is not final, as domestic legislation is being formed and improved, changes in building codes, sanitation and labour protection requirements, etc. are taking place. However, in any case, the examination of construction or reconstruction projects should determine whether the materials presented sufficiently reflect the main purpose of the construction; whether the mandatory conditions of the project comply with construction and hygiene standards; whether the list, specifics of the relative location and size of premises comply with hygiene requirements; whether the construction of the projected facilities takes into account construction, sanitary and hygienic, design and technical requirements, as well as safety and health requirements (including lighting, ventilation, etc.).

In addition, depending on the specifics of the pharmacy and the main technological processes, a number of other issues should be carefully studied (technological equipment, features of finishing materials and their resistance to detergents and disinfectants, etc.) Based on the materials of the examination, a conclusion on the construction project is drawn up in the form that includes the following sections: 1. A statement part, which sets out the main data of the proposed project (series, developer, list of materials submitted for examination, examination data and mandatory procedure, a substantiated list of deficiencies with reference to the relevant regulatory documents). 2. Conclusion (approval), which, depending on the number and nature of the identified deficiencies in the project, makes and justifies one of

the possible decisions: 'The project is approved', 'The project is rejected for approval', with the reasons for the rejection to be specified, 'The project is approved subject to conditions', with the conditions under which further approval is possible in the future after the existing lists are adjusted. If the project is approved, it becomes official, which gives the company the right to open construction financing.

The next step is to finalise the selection of the land plot for the future pharmacy and control the construction sequence. It should be noted that in addition to resolving issues related to the specifics of the land plot boundary (situational plan), it is necessary to obtain comprehensive information on the sanitary condition of the soil, i.e. a set of physical, physicochemical, chemical, bacteriological and biological properties that determine the degree of soil safety in epidemiological and chemical terms. Among the large list of physical indicators of soil sanitary condition, the following should be taken into account: the water table, which should be no closer than 1.5 m from the ground surface; mechanical condition, which should be sandy or loamy; radioactivity level, which should not exceed the natural level by more than 1.5 times (or artificial radionuclides should have activity up to 5 Ku/km2). Bacteriological indicators of soil sanitation include: E. coli titer, which should be from 1.0 to 0.01; anaerobic titer -0.1-0.01; the number of helminth eggs - up to 10 per 1 kg; the number of fly larvae and pupae – only single specimens; sanitary number - 0.86-1.0.

In case of positive results regarding the compliance of the allocated land plot with sanitary and construction standards and labour protection requirements, the territory is divided into its intended purpose, i.e. functional use of the land plot. based on a thorough analysis of the project presentation (master plan). If a pharmacy is built on a separate land plot as an independent structure, the zoning of the plot must take into account the specifics of the neighbourhood's utilities (water supply, sewage, heat supply, etc.). As a rule, in urban residential development, pharmacies occupy the first floors of public or residential buildings or are located as extensions to them. In the case of a separate location of a pharmacy, it is assumed that: the size of the land plot should be 0.05–0.2 hectares; the building area should not exceed 15% of the total area of the land plot; the area of landscaping should be at least 60% of the area of the entire plot; the distance of the pharmacy to the red building line should be at least 15 m; the location of the well should be located at a distance of at least 30 m from cesspools or garbage bins; there should be an economic zone on the territory of the land plot for the placement of auxiliary buildings, and there should be an existing

In terms of landscaping, modern pharmacies widely use small architectural standards and decorative natural ceramic or pressed slabs to cover platforms, sidewalks, walkways and exit stairs. Therefore, both the customer and the builders need to make greater use of materials with high moisture permeability and minimally polished surfaces for the arrangement of such surfaces. Ignoring such recommendations often leads to falls and injuries to pharmacy staff and visitors.

The owner of the pharmacy must bear due responsibility, and therefore take care of the safety of transport and pedestrians on its territory. Therefore, the territory of the pharmacy must be maintained in a proper sanitary condition and have road markings, pedestrian "zebras", road signs, turnstiles, sand for use in case of ice, etc. The quality of the construction of pharmacy establishments and the arrangement of their territories in full accordance with the project decisions largely depends on proper sanitary supervision by the project authors and customers. The Department of Architecture, the Department of Land Resources, and the Department of Capital Construction of the Executive Committees of Local Councils of People's Deputies should be interested in information about such supervision. The practice of construction control shows that for full-fledged sanitary and other types of supervision, the facility should be visited quarterly, and in the precommissioning period – monthly. In the future, construction control is carried out at least 3 times at the following stages: 1st stage - preparatory period and engineering preparation of the territory; 2nd stage - "zero cycle" - digging a pit and erecting a foundation; stage 3 - decoration and completion of construction. When the object is put into operation, the working commission (customer's commission) may include both the head of the facility and leading pharmacists, engineers of pharmaceutical associations, as well as occupational health and safety specialists, etc.<sup>15</sup>. The first stage of the working committee's work is the review of the submitted documentation: a) a list of construction organizations that participated in the construction; b) sets of working drawings for the construction of the object; c) certificates, technical passports, technical conditions agreed with the Ministry of Health of Ukraine, or other documents certifying the quality of construction materials and structures; d) acts for zerocycle works; e) acts of hydraulic tests and acceptance of water supply, drainage, gas supply, centralized heating systems; g) acts of acceptance of external communication networks; h) acts of acceptance of ventilation systems, power supply, etc. The second stage of the activity of the working commission involves supervision of the object and checking the completeness of the decoration and landscaping of the object in accordance with practical documentation and labor protection requirements. Based on the results of the work, they draw up a report on the facility's readiness to be handed over to the state reception commission. Acceptance of objects with defects is not allowed. The state commission can be formed from both representatives of law enforcement agencies and control bodies. It should be noted that in accordance

<sup>&</sup>lt;sup>15</sup> Постанова КМУ «Питання прийняття в експлуатацію закінчених будівництвом об'єктів» URL: https://zakon.rada.gov.ua/laws/show/461-2011-%D0%BF#Text

with the Law of Ukraine "On Labor Protection"<sup>13</sup> and the procedure determined by the Cabinet of Ministers of Ukraine, the employer must obtain a permit for the right to operate production facilities. Issues of a similar content belong to the competence of local executive bodies and are resolved upon submission of labor protection inspectors. The state commission begins work after eliminating the deficiencies identified by the work commission. The result of the work of the state commission is the act of acceptance of the object and the decision to accept it into operation. The act of the state admissions commission is approved by the executive committee of the local council or the head of the state administration. From the moment of approval of the act, the object is considered put into operation.

In economic law, the concept of a subject is determined by the fact that subjects of economic law are participants in economic relations – legal entities, that is, organizations and their structural divisions. In addition, individual citizens, in accordance with Art. 128 of the Economic Code of Ukraine, carry out entrepreneurship without creating a legal entity and are defined as economic entities in the case of entrepreneurial activity subject to state registration. At the same time, subjects of economic law act either as owners of the main means of production, or as economic subjects created by the owners. The governing organizations of ministries and departments are defined by law as bodies authorized by the owner (owners).

The foundations of the legislation of Ukraine "On health care" (Article 16) establish that health care is directly provided by pharmacies and other health care institutions. At the same time, in accordance with this article, health care facilities are created by enterprises, institutions and organizations of various forms of ownership, as well as by individuals, provided they have the necessary material and technical base and qualified specialists. In addition, pharmacy establishments, as a rule, are created not only by legal entities, but also by individuals. In the List of health care institutions, approved by the Order of the Ministry of Health of Ukraine No. 385 of 28.10.2002<sup>16</sup>, pharmacy (pharmacy) institutions are separately defined, which include pharmacies, structural divisions (pharmacy points), pharmacy bases separate (compounds). At the same time, according to this Order, a pharmacy is a health care institution, the main task of which is to provide the population, health care institutions, enterprises, institutions and organizations with medical and medical care. The pharmacy, which is entrusted with the organizational and methodical management of the district (city) pharmacies, is called the central district (city) pharmacy. A pharmacy intended for the primary supply of one or more hospitals, other health care institutions, as well

<sup>&</sup>lt;sup>16</sup> Наказ МОЗ України № 385 від 28.10.2002 «Про затвердження переліків закладів охорони здоров'я, лікарських посад, посад фармацевтів, посад фахівців з фармацевтичною освітою» URL: https://zakon.rada.gov.ua/laws/show/z0892-02#Text

as the population with medicines and medical products is called a hospital or inter-hospital pharmacy, respectively<sup>16</sup>. According to Art. 19 of the Law of Ukraine "On Medicinal Products"<sup>17</sup> the wholesale and retail trade of pharmaceuticals on the territory of Ukraine is carried out by enterprises, institutions, organizations and natural persons – subjects of entrepreneurial activity on the basis of a license issued in accordance with Art. in accordance with the procedure established by law. At the same time, according to DSTU 4303:2004 "Retail and wholesale trade. Terms and definitions of concepts"<sup>18</sup> (effective from 01.07.2005), which establishes Ukrainian terms and definitions of concepts in the field of trade, the requirements of which are valid for use in the work of enterprises, institutions, organizations operating in the territory of Ukraine, as well as ministries (departments): retail trade – a type of economic activity in the field of goods circulation, which includes the purchase and sale of goods to the final consumer and the provision of trade services to him; wholesale trade - a type of economic activity in the field of goods circulation, which includes the purchase and sale of goods under contracts for delivery in batches, for their further sale to the final consumer through retail trade or for production consumption and the provision of related trade services; retail trade enterprise – a property complex that is an economic statutory unit of retail trade with the rights of a legal entity, which purchases goods for their sale to the final consumer and provides him with services; retail turnover – volume of sales of goods to consumers for personal, family, home use and sale of trade services; a wholesale trade enterprise is a property complex that is an economic statutory unit of wholesale trade with the rights of a legal entity, which buys and sells goods in batches under a delivery agreement (contract, etc.) to those who buy them for further resale. or productive consumption and provides them with services related to this trade.

In compliance with the requirements of the legislation, the licensing conditions for conducting business activities in the production of pharmaceuticals, wholesale and retail trade in medicinal products, approved by the joint order of the State Committee of Ukraine on Regulatory Policy and Entrepreneurship and the State Inspection on Quality Control of Medicines dated 03.03.2009 No. 44/27 to pharmaceutical establishments include pharmaceutical warehouses (bases), pharmacies and their structural subdivisions. At the same time: a pharmacy warehouse (base) is a health care institution, the main task of which is to provide medicines to other subjects of medicines by carrying out their wholesale trade; pharmacy – a health care institution, the main task of which is to provide the population, health care

<sup>&</sup>lt;sup>17</sup> Закон України «Про лікарські засоби» URL: https://zakon.rada.gov.ua/ laws/show/123/96-%D0%B2%D1%80#Text

<sup>&</sup>lt;sup>18</sup> ДСТУ 4303:2004 «Роздрібна та оптова торгівля. Терміни та визначення понять» URL: https://dnaop.com/html/61145/doc-%D0%94%D0%A1%D0%A2%D0%A3\_4303\_2004

institutions, enterprises, institutions and organizations with medicinal products through retail trade; pharmacy point - a structural division of a pharmacy, which is created in medical and preventive institutions for the sale of ready-made medicinal products.

Therefore, for business entities, the legally established legal relationship regarding pharmacy activity cannot turn into an objective reality without the special economic competence of its participants. Economic legality, which includes legal capacity and legal capacity, is in its content an elementary legal relationship and actually defines a person as a participant in legal relations regarding pharmacy activity. The reason for these circumstances is that each legal entity is created to achieve certain goals, such as: production of products, performance of works, provision of services, etc. In accordance with the defined goals, the sphere of activity is outlined, that is, the circle of various social relations, which the organization must enter in the course of solving the tasks set before it. A business entity, which is created for the purpose of carrying out pharmacy activities, including those related to the sale of drugs and medical devices, in this area legitimizes the existing legal capacity in the prescribed manner by obtaining a license - a legal mechanism for the realization of the public interest, aimed at, in general, ensuring regulation of pharmacy activity. In a specific form – to ensure the right to entrepreneurial activity precisely when conducting pharmacy activities, that is, it receives state confirmation of introduction into economic circulation.

# 2. Modern trends and strategies of pharmacy network structures as a component of the development of the pharmaceutical industry

In the highly competitive pharmaceutical industry, inventory management and supply chain optimization are critical success factors. Retail pharmacies play a key role in the distribution and availability of medicines and pharmaceutical services. PCD (Propaganda-Cum-Distribution) is a common business model in the pharmaceutical industry where companies provide marketing support and distribute their products through retail pharmacies. Retail pharmacies act as intermediaries between pharmaceutical manufacturers and end consumers. This ensures that medicines and medical products are easily accessible to patients. Effective inventory and supply chain management within the PCD model is essential to maintaining a steady flow of pharmaceutical products and meeting growing demand. Retail pharmacies play a vital role in inventory management and supply chain optimization. They are responsible for: ensuring the availability of a wide range of pharmaceutical products; inventory level management; optimization of the supply process.

Retail pharmacies use different strategies to effectively accomplish these tasks. Retail pharmacy strategies for effective management are divided into 9 main groups (approaches).

1. Demand forecasting and inventory planning. Retail pharmacies can accurately forecast demand and plan their inventory levels by analyzing: sales statistics; analysis of market trends; customer requirements. This proactive approach helps prevent shortages and minimize excess inventory. Advanced data analysis tools can help identify patterns and predict future demand, allowing pharmacies to make informed decisions.

2. Effective procurement practices. Establishing strong relationships with pharmaceutical manufacturers and suppliers is critical for retail pharmacies. By fostering collaboration and open communication, they can negotiate favorable terms and maintain a reliable procurement process. This ensures a constant supply of quality products at competitive prices, reducing the risk of disruptions in the supply chain.

3. Segmentation and classification of reserves. Retail pharmacies often categorize their inventory based on factors such as: product type, expiration date, demand patterns. Segmentation allows them to: prioritize products; identify slow-selling products; perform the necessary actions (promotions or returns). With a clear understanding of their stock composition, pharmacies can efficiently allocate resources and minimize waste.

4. Real-time inventory tracking. The use of advanced inventory management systems allows retail pharmacies to monitor inventory levels in real time. This ensures: accurate visibility of stocks; facilitates timely reordering; reduces the risk of shortage or surplus. By implementing automated inventory tracking systems, pharmacies can optimize their operations and make decisions based on accurate information.

5. Effective logistics and distribution. Optimization of logistics and distribution processes includes: minimization of transport costs; reduction of work execution time; improving the overall efficiency of the supply chain. Technologies such as route optimization software to optimize delivery schedules are relevant.

6. Risk assessment. Potential risks in the supply chain must be identified and assessed, for example: supply disruptions, product recalls, regulatory changes. Develop contingency plans and implement risk mitigation strategies to minimize impact on inventory and supply chain operations.

7. Management of suppliers. Strong relationships should be established with reliable suppliers who can deliver high-quality products consistently and on time. Conduct regular performance reviews and maintain open communication to quickly resolve any issues.

8. Continuous improvement. Key Performance Indicators (KPIs) should be regularly analyzed and evaluated to identify areas for improvement. Metrics such as inventory turnover, order fulfillment and on-time delivery performance should be measured to drive continuous improvement initiatives.

9. Cooperation with technology providers. Applying technology solutions specifically designed for the pharmaceutical industry can significantly

improve inventory and supply chain management. A reliable solution that combines various functions, for example: inventory tracking, sales analysis, order management. The pharmacy management system should: automate routine tasks, provide comprehensive analytical reports, increase overall work efficiency.

An example of the use of innovative solutions in the pharmaceutical industry is also the use of the network. Together, multilateral controlled networks combined with a digital supply chain network provide unique advantages for supply chain management. The digital supply chain network is a true network, meaning that all solutions are multi-faceted, designed to connect and coordinate between trading partners, systems and networks. They are adaptable and extensible.

Because all solutions work on the same network, they work intelligently together and in real-time, so planning is always in sync with execution, and supply is always in sync with demand and coordinated with logistics. For example, the One Network digital supply chain has integrated business planning engines that use actual supply and demand conditions to recalculate plans for each product anywhere in real time, as needed. Optimized execution engines use these highly accurate plans to automatically execute the vast majority of transactions using real-time decision making (NEO) technology, allowing the human mind to focus only on those exceptions that NEO cannot handle<sup>19</sup>. A multi-party real-time network enables this powerful NEO AI assistant framework that alerts users to problems and allows them to quickly solve them with smart recipes through the Smart Control Tower. In offline mode (limited by pre-configured parameters), these AI assistants can actually find and fix potential problems before they affect customers and the pharmacy.

By connecting to a network that uses smart controlled networks and AI assistant technology, pharmaceutical companies can quickly optimally deploy these strategies and begin to take advantage of the immense benefits of AI. Together, they provide critical data for machine learning algorithms to continuously adjust predictions based on real-time network data, fine-tune supply chain policies, and learn and adapt to specific conditions and patterns in a company's supply chain. Users get better tools and actionable recommendations from AI assistants that increase productivity, resource efficiency and customer service while reducing costs and waste.

Due to the Russian invasion, which began on February 24, 2022, the Ukrainian health care system is facing many challenges. A large number of medical facilities have been destroyed, and the availability of others is often

<sup>&</sup>lt;sup>19</sup> Бойченко М. В. Управління ланцюгами поставок у повоєнний період. Вісник економічної науки України. 2022. № 1 (42). С. 148–152. DOI: https://doi.org/10.37405/1729-7206.2022.1(42).148-152

limited due to a lack of qualified medical personnel. In addition, millions of Ukrainians with chronic diseases suffer due to war-related problems with long-term treatment. The availability of medicines is especially limited in the occupied territories. According to the State Statistics Authority<sup>20</sup>, as of August 18, 2022, about 505 pharmacies were damaged in the East of Ukraine, 47 were completely destroyed. In addition, the occupiers block the humanitarian aid provided to these territories by the Ukrainian government or other countries. Fortunately, in the territories under the control of the Government of Ukraine, the acute shortage of medicines, which was observed at the beginning of the war, has already been eliminated. However, not all medicines are now fully available. The economic availability of drugs is also significantly affected by the significant increase in the cost of drugs and the drop in average wages. The government of Ukraine is trying to minimize the impact of these war challenges by adopting new legislation. This is, in particular, the simplification of procedures for licensing, quality control and import of pharmaceuticals to Ukraine. Other measures include providing displaced people with the opportunity to use the services of local health care facilities, expanding the scope of the electronic prescription system, allowing primary care doctors to write prescriptions for refugees, increasing the number of drugs that are reimbursed for long-term treatment, etc.

The war led to a serious decline in the Ukrainian economy, causing a significant increase in the budget deficit and critical dependence of the Ukrainian economy on international aid. In June/July 2022, more than 50% of the deficit was covered by financial assistance from international partners. However, the International Monetary Fund has assessed as a threat that by the end of the year the fall in GDP may reach the level of 33-35% and predicts a significant increase in public debt to more than 85% of GDP<sup>21</sup>. In addition, Ukraine faces high rates of inflation. The National Bank of Ukraine predicts that prices may rise by at least 30% by the end of the year<sup>22</sup>. Studies conducted in Ukrainian pharmacies showed a price increase of 20-25%, and in some of them – up to  $60\%^{23}$ . Experts predict even more growth. It is noteworthy that at the same time salaries in companies and enterprises of the private sector decreased by 10-50% compared to the pre-war period. All of these factors have profound implications for sustaining long-term therapy, as the high cost of drugs reduces their availability.

Factors that play a major role in the rapid increase in drug prices are, among others, complicated logistics due to the current closure of air and sea

<sup>&</sup>lt;sup>20</sup> Державна служба статистики України. https://www.ukrstat.gov.ua/

<sup>&</sup>lt;sup>21</sup> Інтерфакс-Україна. https://www.epravda.com.ua/news/2022/04/20/686015/

<sup>&</sup>lt;sup>22</sup> Національний банк України. https://bank.gov.ua/ua/news/all/natsionalniy-bank-ochikuye-spovilnennya-inflyatsiyi-ta-zrostannya-ekonomiki-z-nastupnogo-roku--inflyatsiyniy-zvit

<sup>&</sup>lt;sup>23</sup> Укрінформ. https://www.ukrinform.ua/rubric-health/3784687-ci-ne-perebilseni-cutkipro-cergove-pidvisenna-vartosti-likiv.html

transport routes, as well as the destruction by the Russian occupiers of many warehouses with storage of drugs and raw materials. It should be emphasized that up to 75% of drugs sold in Ukrainian pharmacies are of domestic production. However, almost all raw materials for the manufacture of medicines, which have risen in price worldwide, are imported. Another problem is the higher exchange rate of the US dollar against the hryvnia, as well as rising prices and fuel shortages.

Ukraine is trying to flexibly adapt its regulatory and legal framework to the extraordinary scenario of war, trying to overcome difficulties. Thus, in the first month of the war, the state body adopted 29 orders that related to various aspects of medical and pharmaceutical services for all categories of the population in connection with Russian military aggression. This also applies to the maintenance of long-term therapy. One of these steps is the simplification of procedures for licensing, quality control and import of medicinal products into Ukraine, which provides for the possibility of emergency state registration of medicinal products by simplifying the requirements for labeling and expiration dates of imported medicinal products. Before the war, imported medicines had to have an expiration date of at least half of the manufacturer's specified expiration date. According to the new changes, this period is not limited, but should not expire. Medical devices, which are already registered in Ukraine, can now be imported into its territory without labeling in the Ukrainian language, subject to the addition of instructions for use (inserts) approved in Ukraine and a warranty letter. Medicines that are not registered in Ukraine can be imported only for the provision of the Armed Forces of Ukraine and health care facilities (except pharmacies), without the right to retail sale.

Reimbursement of the cost of medicines (Reimbursement Program) is a new issue in Ukraine, as it was initiated back in 2017. It applies only to outpatient treatment of certain diseases, namely cardiovascular diseases, bronchial asthma, diabetes, mental and behavioral disorders, epilepsy. It covers only 368 different medicines (116 free) and 76 insulin products (47 free), and some changes in their numbers are expected. The program continues to work in the territory under the control of the Government of Ukraine with a number of changes to the procedure for its implementation. "Reimbursable drugs can be prescribed and dispensed by electronic or traditional paper prescriptions by any general practitioner, regardless of the patient's place of residence, in contrast to pre-war conditions". Nevertheless, the number of prescriptions decreased. Not all copay brand names are currently available. The National Health Service of Ukraine reimburses pharmacies for medicines dispensed with compensation. However, not all pharmacies that participated in this program before the war continue to dispense drugs for compensation. Therefore, patients are advised to check in advance whether a particular pharmacy offers reimbursement options.

In July 2022, Ukraine adopted a new Law "On Medicinal Products" with the aim of harmonizing Ukrainian pharmaceutical legislation and management with EU approaches (values). By reducing regulatory hurdles, this policy move aims to attract additional investment, promoting not only immediate sustainability, but also sustainable growth and deeper integration into the European pharmaceutical landscape. The Ministry of Health plans to develop the first drafts of normative legal acts, which are necessary for the creation of a single state regulatory body, which will further align the country's pharmaceutical industry with the EU. The government's efforts to align national legislation with EU standards are aimed at simplifying the entry of FPs produced in Ukraine to the European market, potentially making Ukraine an attractive center for international pharmaceutical investment. Ukraine should also benefit from the fragility of global supply chains exposed during the Covid-19 pandemic as Europe looks to near-term pharmaceutical production. Thanks to its strategic geographical location, skilled workforce and cost-effective production environment, Ukraine is poised to become a compelling alternative to existing centers of pharmaceutical production. However, the uncertainty created by martial law in Ukraine poses serious downside risks that will deter foreign investment in the short to medium term. In addition, more than 7 million Ukrainians are now refugees abroad, which is 15% of the country's population. This significantly reduces regional and national demand for FP and hinders foreign investment.

Local pharmaceutical production of LP continues to increase, despite restrictions due to the war with Russia. Despite the ongoing conflict, Ukraine's pharmaceutical sector has demonstrated remarkable resilience and continues to attract investment, demonstrating a strong commitment to growth and innovation in a challenging environment. Prior to the escalation of the conflict, such domestic firms as FF "Farmak" were already expanding their production capacity, and this dynamic is largely maintained. In 2023, Farmak FF announced the company's investments in the amount of UAH 1.5 billion. (USD 39.0 million), of which UAH 600 million (USD 15.6 million) was allocated to research and development, as well as the introduction of 22 new products to the market<sup>24</sup>. The local production of pharmaceutical products showed a CAGR (cumulative average annual growth rate) of 12.5% over the past 7 years, reaching approximately UAH 59.4 billion. (US\$1.5 billion) in 2023, which indicates strong and sustainable investments in production and infrastructure in Ukraine. By 2028, this cost is expected to grow to UAH 81.6 billion (\$2.1 billion), representing a CAGR of 6.6%. This level of CAGR will be supported by the expected continuation of investments in production in Ukraine and greater harmonization of legislation with the EU.

In military conditions, access to medicines and medical care can be limited or difficult. Pharmacy networks play an important role in providing the

<sup>&</sup>lt;sup>24</sup> Акцінерне товариство «Фармак». https://farmak.ua/news/farmak-otrimav-nagorodu-ambasador-investiczij/

population with the necessary medical drugs and tools. In military conditions, pharmacy chains must be ready to quickly respond to changes in the situation and ensure a sufficient supply of drugs and medical supplies. Due to changes in living conditions and fear of health threats, the demand for certain drugs, such as antibiotics or dressings, may increase. Pharmacy chains have to adapt their assortment and stocks according to new needs.

In a military environment, pharmacy chains must pay special attention to ensuring the safety of their staff and customers, including safety measures for the transportation and storage of medical drugs. Pharmacy chains can take an active role in cooperation with medical institutions and humanitarian organizations to provide the population with the necessary drugs and medicines during martial law.

# CONCLUSIONS

The pharmaceutical industry is an important element of the health care system, which provides the population with access to medicines and medical services. A review of current trends in the pharmaceutical industry shows that pharmacy chains play a significant role in this segment of the economy.

The development of pharmacy chains is associated with constant changes in consumer demand, technological progress and regulation in the field of health care. Growing competition in the market and changes in legislation present a number of challenges to pharmacy chains, which they must respond to in order to ensure their competitiveness and operational efficiency.

Placement of pharmacy chains can be a strategic component of their success. Pharmacies located in attractive locations, with high traffic or near medical facilities have an advantage in terms of attracting customers. Modern trends show an increase in the number of pharmacy chains in cities, as well as the development of chains in individual medical centers or shopping complexes. There is also a drive to expand geographic coverage, including opening pharmacies in rural and remote areas.

Pharmacy establishments can have different forms of ownership, including private, public, corporate, and cooperative. Each form of ownership has its advantages and disadvantages. For example, private pharmacies can be more flexible and respond more quickly to changes in consumer demand, while public pharmacies can ensure greater availability of health services to the population.

The form of ownership can affect the quality of service and the range of medicines that are available in pharmacies. For example, corporate (chain) pharmacies can have a larger volume of purchases and more opportunities to offer a variety of products. Regardless of the form of ownership, pharmacies must be flexible and adaptable to changes in market conditions and consumer demands.

The ability to strategically plan and invest in innovative solutions will be a key factor in future success for pharmacy chains. The development of new technologies, including digital services and telemedicine, can provide competitive advantages. Pharmacy chains can expand their range of products and services, including not only medicines, but also health and beauty products, additional consulting services and healthy lifestyle programs.

During a state of war, pharmacy chains must be ready to quickly respond to changes in the situation and ensure a sufficient supply of medicines and medical preparations. Due to changes in living conditions and fear of health threats, the demand for certain medicines, for example, antibiotics or dressing materials, may increase. Pharmacy chains have to adapt their assortment and stocks according to new needs.

#### SUMMARY

In the modern world in general, and in Ukraine in particular, pharmacy chains play a key role in ensuring the population's access to medicines and pharmaceutical services. It should be noted that these networks have become not only a place for selling medicines, but also consultation centers, a source of health information and a place for providing additional medical (pharmaceutical) services. The development of pharmacy chains is reflected in the state of public health and the country's economy. The subject of the study was the current state and prospects for the development of pharmacy chains. The object of the study was the peculiarity of the functioning of the retail sector of the pharmaceutical industry in Ukraine. The structure of the work includes an analysis of the theoretical aspects of the functioning of pharmacy enterprises, a study of the current state of pharmacy networks, an analysis of factors influencing their development, a review of development prospects and conclusions from the conducted research.

The paper analyzed the current state of pharmacy chains and determined the prospects for their development in Ukraine. An overview of the main trends in this field was conducted, the factors affecting the development of pharmacy chains were studied, and possible ways of optimizing their activities were considered. The authors reviewed the literature on pharmacy chains, their condition and development; the current state of pharmacy chains, including their structure, location, forms of ownership, range and level of service provision, was investigated; analyzed the key players in the pharmaceutical market of the wholesale and retail sales segments, their strategies and competitive interaction. Opportunities and prospects for the development of pharmacy chains were also analyzed, including new technologies, expanding the assortment, improving customer service and other strategic directions. During martial law, pharmacy chains must be ready to quickly respond to changes in the situation and ensure a sufficient supply of drugs.

#### **Bibliography**

1. R. Kiyosaki. Business of the 21st century. 2010. P. 142. http://dspace.vnbrims.org:13000/jspui/bitstream/123456789/2358/1/The%20 Business%20of%20the%2021st%20Century.pdf 2. Шандрівська О. Є., Цветковська А. В. Дослідження фармацевтичного ринку України: у фокусі концентрація ринку. Вісник Національного університету "Львівська політехніка". Серія "Проблеми економіки та управління". 2022. № 1 (9). С. 56–68.

3. Polevoy G.G., Sablin A.B. Development of coordination abilities with the help of the burpee exercise. International Journal of Pharmaceutical Research & Allied Sciences. 2022.11(1). P. 108–12. https://doi.org/10.51847/eYLjcMBn9G

4. Mann M.V., Popkin D.L. Handbook of Dermatology: A Practical Guide. Wylie-Blackwell. 2019. P. 259. https://www.wiley.com/en-us/Handbook +of+Dermatology%3A+A+Practical+Manual%2C+2nd+Edition-p-97811184085205.

5. Аптека. online.ua. https://www.apteka.ua/article/631700

6. ПрАТ Фармацевтична компанія «Дарниця». https://darnytsia.ua/ press-center/novini-kompan/darnitsya-zaprovadzhuie-tsifrovizatsiyu-sistemiupravlinnya-personalom

7. Forbes Ukraine. https://forbes.ua/news/darnitsya-vipuskae-novi-likipopri-viynu-farmkompaniya-zapustila-u-prodazh-15-preparativ-z-pochatkuroku-21102022-9204

8. AT «Фармак». https://farmak.ua/news/ukrayinskih-likiv-u-evropistane-bilshe-farmak-budue-zavod-v-ispaniyi/

9. Постанова КМУ «Деякі питання екстреної державної реєстрації лікарських засобів, медичних імунобіологічних препаратів, препаратів крові, що виробляються або постачаються в Україну протягом періоду дії воєнного стану, під зобов'язання» URL: https://www.kmu. gov.ua/npas/deyaki-pitannya-ekstrenoyi-derzhavnoyi-reyestraciyi-likarskih-zasobiv-medichnih-imunobiologichnih-preparativ-preparativ-krovi-shcho-viroblyayutsya-abo-postachayutsya-v-ukrayinu-471

10. Постанова Кабінету Міністрів України «Ліцензійні умови провадження господарської діяльності з виробництва лікарських засобів, оптової та роздрібної торгівлі лікарськими засобами, імпорту лікарських засобів (крім активних фармацевтичних інгредієнтів)» URL: https://zakon.rada.gov.ua/laws/show/929-2016-%D0%BF#Text

11. Наказ Держбуду України від 4 січня 2001 р. № 2 Державні будівельні норми України. Будинки і споруди. Заклади охорони здоров'я ДБН В.2.2-10-2001 URL: https://zakon.rada.gov.ua/rada/show/v0002241-01#Text

12. Закон України «Про систему громадського здоров'я» URL: https://zakon.rada.gov.ua/laws/show/2573-20#Text

13. Закон України «Про охорону праці» URL: https://zakon.rada.gov.ua/laws/show/2694-12#Text

14. Кодекс України «Про адміністративні правопорушення» URL: https://zakon.rada.gov.ua/laws/show/80731-10#Text

15. Постанова КМУ «Питання прийняття в експлуатацію закінчених будівництвом об'єктів» URL: https://zakon.rada.gov.ua/laws/show/461-2011-%D0%BF#Text

16. Наказ МОЗ України № 385 від 28.10.2002 «Про затвердження переліків закладів охорони здоров'я, лікарських посад, посад 260

фармацевтів, посад фахівців з фармацевтичною освітою» URL: https://zakon.rada.gov.ua/laws/show/z0892-02#Text

17. Закон України «Про лікарські засоби» URL: https://zakon.rada.gov.ua/laws/show/123/96-%D0%B2%D1%80#Text

18. ДСТУ 4303:2004 «Роздрібна та оптова торгівля. Терміни та визначення понять» URL: https://dnaop.com/html/61145/doc-%D0%94%D0%A1%D0%A2%D0%A3\_4303\_2004

19. Бойченко М. В. Управління ланцюгами поставок у повоєнний період. Вісник економічної науки України. 2022. № 1 (42). С. 148–152. DOI: https://doi.org/10.37405/1729-7206.2022.1(42).148-152

20. Державна служба статистики України. https://www.ukrstat.gov.ua/ 21.Інтерфакс-Україна.

https://www.epravda.com.ua/news/2022/04/20/686015

22. Національний банк України. https://bank.gov.ua/ua/news/ all/natsionalniy-bank-ochikuye-spovilnennya-inflyatsiyi-ta-zrostannyaekonomiki-z-nastupnogo-roku--inflyatsiyniy-zvit

23. Укрінформ. https://www.ukrinform.ua/rubric-health/3784687-ci-ne-perebilseni-cutki-pro-cergove-pidvisenna-vartosti-likiv.html

24. Акцінерне товариство «Фармак». https://farmak.ua/news/farmak-otrimav-nagorodu-ambasador-investiczij/

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