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QUALIFICATION WORK

on the topic **«ANALYSIS OF ECONOMIC INDICATORS OF TRADE
AND FINANCIAL ACTIVITIES OF PHARMACY ESTABLISHMENTS»**

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ANNOTATION

The qualification work presents the results of the analysis of socio-economic aspects of the functioning of pharmacies in modern conditions. The main problems and prospects for the development of the Moroccan pharmacy are identified.

The work is presented on 45 pages and consists of 3 chapters, general conclusions and a list of used literature from 32 sources. The results of the study are illustrated by 22 figures and 2 tables.

Key words: pharmacy, indicators, economic activity, pharmacist, medicines, inventories.

АНОТАЦІЯ

У кваліфікаційній роботі представлено результати аналізу соціально-економічних аспектів функціонування аптек у сучасних умовах. Визначено основні проблеми та перспективи розвитку марокканської аптеки.

Робота представлена на 45 сторінках і складається з 3 розділів, загальних висновків та списку використаної літератури з 32 джерел. Результати дослідження ілюструються 22 рисунками та 2 таблицями.

Ключові слова: аптека, показники, господарська діяльність, фармацевт, лікарські засоби, товарні запаси.

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ABBREVIATIONS

AMO – Assurance Maladie Obligatoire

EU – European Union

ERP – Enterprise Resource Planning

WHO – World Health Organization

HS – Healthcare system

HCI – Healthcare institution

USA – United States

INTRODUCTION

Actuality of topic. Today, pharmaceutical costs are increasing, and this problem is putting pressure on the healthcare system of all countries. The process of evaluating the financial performance of pharmaceutical activities is relevant and important to ensure that limited resources are spent to obtain the best results. In the conditions of the modern pharmaceutical market, which is constantly changing, pharmacy managers must carry out strategic and tactical planning every day, which ensures the enterprise the most stable position in the pharmaceutical market [4]. Analysis of the profit of pharmacy enterprises is one of the main criteria for assessing the effectiveness of their functioning. To determine the profitability of pharmacies, it is necessary to conduct a financial and economic analysis of the enterprise's performance indicators, assessing the implementation of the profit plan as a whole and by individual types of profits and losses, studying the dynamics of financial results over a number of years and assessing the level of profitability of the enterprise [32]. The purpose of our study was to consider indicators for assessing the economic and financial indicators of pharmacies.

Financial analysis of a pharmacy's activities, forecasting its condition, the effectiveness of economic activities, as well as ways to increase profitability in the modern world allow the head of the enterprise to present a picture of the financial and economic situation to make timely decisions regarding operational planning in the organization of management activities.

The purpose of the qualification work to analyze the economic indicators of trade and financial activities of pharmacies.

To achieve the set goal, the following research tasks were defined:

- analyze the activities of pharmacy establishments in modern conditions;
- to investigate the characteristics of the main indicators of economic and financial activity of pharmacy enterprises;
- to conduct a survey among pharmaceutical workers regarding the

conditions for organizing stockpiling;

– to analyze economic indicators characterizing economic activity, using the example of a Moroccan pharmacy.

Research objectives. Data from special literature and the relevant legislative and regulatory framework, the pharmaceutical market, data from managerial accounting of the movement of goods and materials in pharmacy establishments.

The subject of the study. Organization of the process of pharmaceutical provision to the population (macroeconomic level of research) and the main indicators of the financial and economic activities of a pharmacy in Morocco (microeconomic level of research).

Research methods. A complex of general theoretical and applied research methods was used, which are presented in the works of scientists from the organizational, economic and marketing directions in pharmacy.

The practical significance of the work lies in the possibility of using the obtained results in the development of effective directions for increasing the level of efficiency of pharmacy establishments in modern conditions.

Elements of scientific research – the work presents for the first time the results of a comprehensive analysis of pharmacy efficiency indicators (using the example of a pharmacy in Morocco), and also conducted a sociological survey of pharmacy specialists on the conditions for organizing the supply of medicines.

Structure and scope of qualification work. The work is presented on 45 pages and consists of 3 chapters, general conclusions and a list of references, which consists of 32 sources. The results of the study are illustrated by 22 figures and 2 tables.

CHAPTER 1

BASIC PROVISIONS OF THE ECONOMY OF PHARMACY ESTABLISHMENTS AS BUSINESS ENTITIES

1.1 Pharmacy as a healthcare institution and as a business entity

Today, pharmacy plays a significant and critical role in the financial and operational performance of the entire healthcare system (HS). While HS face daunting challenges, increasing risks, and regulatory and compliance burdens, high-performing pharmacy organizations are poised to reduce financial losses and improve their operations [6].

Rapidly rising drug prices worldwide, increasing demand for workforce reductions, leakage of ancillary services and related financial losses are just some of the challenges that pharmacy facilities have faced in recent years [10]. From an economic perspective, the concept of sustainable development in pharmacy aims to ensure the continued viability and profitability of global pharmaceutical services and activities, as well as to preserve the health of the environment and society at various levels. The pharmaceutical sector today is not only about medicines, but also one of the most stable pillars of the global economy, and the pharmacy is an intermediary between manufacturers and consumers. Improving the economic sustainability of pharmacy involves making smart decisions that combine financial calculation with the main priority of providing excellent pharmaceutical services to patients. In this regard, the sustainable development of pharmacy institutions can be considered from an economic point of view, focusing on effective cost management and diversification of services [19]. The first step to this is smart cost management, which is essential to maintaining profitable pharmaceutical services. This involves careful investment in workforce and effective staff scheduling to ensure seamless patient care and prevent unnecessary labor costs.

The global pharmacy retail business is undergoing significant changes under the influence of technological progress, changing consumer needs and global challenges such as pandemics or economic instability. In today's economic conditions, pharmacies need to analyze their operations and look for new ways to improve efficiency, as well as skillfully use cost-effective management methods [19].

The functioning of a pharmacy is a dynamic process, where the circulation of capital is a source for its viability. This process usually goes through three key stages [14,19,24].

The monetary stage involves investing funds in the purchase of medicines and medical devices. At this stage, it is important to choose the right assortment so that money does not sit on the shelves.

The commodity stage is reflected in the formation of stocks and direct sales of medicines. The dynamics of this stage depends on the quality of service, location and demand (seasonality, epidemiological situation).

And the last stage is the receipt of revenue, which includes cost and profit. Part of this money is returned to purchases, closing this cycle.

From an economic point of view, a pharmacy is a unique business entity that combines the functions of a healthcare institution (HCI) and a commercial organization. It acts as a retail link in the pharmaceutical sector, where its activities are aimed at generating profit through the provision of pharmaceutical assistance to the population. The dual nature of a pharmacy lies in the simultaneous fulfillment of a social mission (providing medicines) and commercial activity (selling goods to generate income) [25,26]. In different countries around the world, pharmacies may be owned by the state, private individuals, or companies. The form of ownership usually depends on the economic model and the specific healthcare system [6,12].

The most common model in the world is private ownership. For example, in the United States (USA), Germany, Great Britain, pharmacies operate as enterprises that can be either individual institutions or pharmacy chains [19].

The state may own pharmacies to provide medicines to privileged categories of the population, control prices, or work in remote areas where private business is

unprofitable. Also, in many countries there is a mixed model (for example, in Sweden), where private and public pharmacies exist in parallel [17].

A pharmacy is a HCI that functions as a business organization that provides the population and medical institutions with medicines, medical devices, and also manufactures extemporaneous drugs according to doctors' prescriptions. It combines the function of healthcare through the provision of pharmaceutical care and quality control with trading activities and assortment risk management.

The pharmacy combines these two sides: it is responsible for the patient's health, while acting as a commercial entity in the pharmaceutical market. This duality determines the specifics of its management and regulation. We have listed the comparative characteristics of these functions in table 1.1 [2,18,19].

Table 1.1

Comparative characteristics of pharmacy functions

Functions	Pharmacy as a health care institution	Pharmacy as an economic organization
Definition	Health care institution, the main purpose of which is to provide pharmaceutical care and provide the population with quality medicines	Business entity, operates in market conditions and must ensure its own financial stability
Goal	Maintaining the patient's health	Profitability and profitability
Object	Pharmaceutical care: provision of consultations by specialists on the rational use of drugs.	Commodity (medicinal product)
Indicator	Quality and safety of medicines: incoming control of each batch of drugs by an authorized person to prevent counterfeiting.	Sales volume, profit
Head	Head pharmacist (responsible for pharmaceutical activities)	Manager (responsible for finances)

Pharmacy establishments, as they are considered HCI, are subject to strict regulation. Activities are controlled by government bodies, various pharmaceutical associations and are regulated by licensing conditions [14].

Trading activities consist in the retail sale of medicines and medical devices for the purpose of making a profit. Competent management of the assortment contributes to the formation of an optimal list of goods that meets demand and standards. Logistics and supply are of great importance in organizing work with distributors, ordering goods and managing warehouse stocks. Of great importance in making a profit is the correct financial reporting of the pharmacy, which consists in keeping records of income, expenses, tax payments and analyzing the profitability of the activity.

The specifics of the economic activity of a pharmacy are marked by a few features, and for the successful functioning of market relations in pharmacy enterprises, it is necessary to fulfill several conditions [18,24].

1. Pharmaceutical services are provided only by certified specialists.
2. The specificity of the assortment is that in addition to medicines, pharmacies sell medical products, cosmetics and dietary supplements. Each category has its own requirements for certification and taxation.
3. The sale of a special product, which is characterized by appropriate requirements for quality and storage conditions, requires compliance with certain storage rules, and increases storage costs due to necessity.
4. Medicines have a limited shelf life. Incorrect forecasting of demand leads to direct losses due to the inability to sell expired goods.
5. The release of most drugs according to doctors' prescriptions (the demand for drugs is formed by intermediate consumers).
6. A significant part of the turnover depends on medical prescriptions and state reimbursement programs (reimbursement of the cost of drugs by the state).
7. Production of drugs according to individual prescriptions, which is costly.
8. Growth of specific requirements for the warehouse and equipment of commercial and industrial premises.

1.2 Analysis of the activities of pharmacy establishments in modern conditions

The main priority of the state policy in the field of medical provision is the supply of medicines to the consumer in a sufficient assortment and volume at affordable prices and appropriate quality. The implementation of this task is carried out by creating a market of pharmaceutical services on the basis of competition [25].

When organizing any business, an entrepreneur, first of all, sets himself the goal of making a profit. To do this, he studies the market situation, takes into account the demand for a certain product (works, services) in the region where the activity will be carried out, and looks for his client - the buyer. The pharmacy business is one of the most profitable areas of activity [13,32].

The demand for pharmaceutical products is always and everywhere, as people are still reluctant to save on their health. Despite the stable demand for medicines, the net margin of pharmacies has been compressed in recent years due to several key factors.

Pharmacies around the world are facing significant challenges due to labor shortages, financial pressure due to reduced reimbursement rates and drug shortages. Modernization requires a transition from product-centric to patient-centric care in the context of rapid digital transformation, including the introduction of artificial intelligence, and responding to post-pandemic needs.

Rapidly rising drug prices, increasing demand for workforce reductions, leakage of additional services, and related financial losses are just some of the challenges pharmacies have been facing recently [13,25].

Pharmacies are struggling with declining profitability due to rising operating costs, supply chain vulnerabilities, and pressure to transition to service-based healthcare. This comes against a backdrop of increasing competition, declining reimbursement rates, and high fixed costs that are problems the financial viability of pharmacies. After analyzing relevant sources, we identified the main key problems that pharmacies have faced in recent years, which reduce their profitability (tabl.1.2) [25,29,32].

Table 1.2

A list of current challenges facing pharmacies

Economic and financial difficulties	Personnel shortage and professional burnout	Technological challenges and digitalization	Logistics and drug shortages
1	2	3	4
<p><u>Unstable funding:</u> In many countries, pharmacies are facing budget shortfalls. Many commercial pharmacies in Europe are considered unviable in the short term due to reduced real funding.</p> <p><u>Rising operating costs:</u> Inflation, high energy and logistics prices are putting pressure on business margins.</p>	<p><u>Staffing:</u> By 2025, employers in the US, some EU countries and Ukraine will face a shortage of staff, with vacancies exceeding 2022 levels. Demand for pharmacists is growing faster than supply. A critical shortage of pharmacists, with 21 percent of employees leaving pharmaceutical companies, is limiting capacity.</p>	<p><u>Competition from e-commerce:</u> Online pharmacies offer prices 10-20% lower than traditional establishments, which leads to customer churn, especially among young people and patients with chronic diseases.</p> <p><u>Digital divide:</u> Many pharmacies operate without proper software. In some regions, up to 80% of staff report a lack of technological resources, forcing them to perform all operations manually.</p>	<p><u>Supply chain disruptions:</u> Geopolitical instability and dependence on active ingredient production in China and India are creating shortages of critical medicines.</p> <p><u>Medicine shortages:</u> European countries have experienced record drug shortages in recent years, and the situation remains critical, putting patients' health at risk.</p>

continuation of table 1.2

1	2	3	4
<p><u>Price pressure:</u> Regulatory restrictions on drug prices are reducing profitability, which limits investment opportunities.</p> <p>Rising commodity prices and high inflation rates are reducing the profitability of both retail and independent pharmacies.</p>	<p><u>Burnout:</u> High workloads are leading to half of all staff experiencing burnout, which is driving the exodus of professionals from the profession.</p>	<p><u>Costs of digital transformation:</u> While the implementation of artificial intelligence and digital platforms is necessary for efficiency, it requires significant investments, which reduces short-term profitability.</p> <p><u>Cybersecurity:</u> The pharmaceutical industry is in the top 3 sectors in terms of the cost of data breaches.</p>	<p><u>Economic factors:</u> The low price of generics makes their production unattractive for pharmaceutical companies, leading to production suspensions.</p>

Features of organizing a highly profitable pharmacy business

The organization of a highly profitable pharmacy is a combination of a good location, a well-thought-out assortment and high service. The elements of this structure can also be pricing policy, additional services, showcase design, sales potential, staff, and interaction with the target audience [18,27].

The choice of a pharmacy location is determined by its convenience for potential customers and the organization's internal capabilities. This choice is

influenced by an analysis of traffic and pedestrian flows near the pharmacy, as well as the purchasing power of the population.

Considering the economic activity of a pharmacy, it should be noted the need to develop a strategy for its management, taking into account the width, depth and length of the product range. In addition, it is mandatory to analyze the features and characteristics of demand for different groups of goods, the product matrix as a base and local customer demand. Such a product policy is dictated by the need to differentiate the price and product program depending on local customer demand and competition [31].

It should be noted that one of the most important factors of effective sales is pricing policy. The difference between the general price level and the average market price in one direction or another, the frequency of changes, the presence of expensive/cheap goods, types and sizes of discounts, the presence of discount cards are considered as elements of pricing policy. They also serve as initial information for conducting price analysis in a competitive environment, analyzing one's own price education system, developing a technology for setting a competitive price, organizing and other stimulating activities [18,25,27].

Financial indicators are influenced by the key components of traffic, which directly form the revenue part of the pharmacy's budget. Sales potential, which include the number of customers per day, pharmacy visit patterns on different days of the week and different pharmacy hours, average purchase price, and sales volume per day, week, and month, help optimize delivery schedules. Based on the data obtained, direct and indirect factors affecting sales are determined, sales potential is evaluated and a sales plan is developed [27].

Understanding traffic allows to hire an additional pharmacist only for certain hours, maintaining a high speed of service without unnecessary costs.

Today, it is important for pharmaceutical organizations to consistently build communicative relationships with the target market, which ultimately shape the company's image [13].

The success of a pharmacy is determined by a combination of financial profitability and high quality of service, which includes a wide range, competitive prices, qualified personnel, and the main share is occupied by the location of the pharmacy (fig.1.1) [3,9,18,19,25].

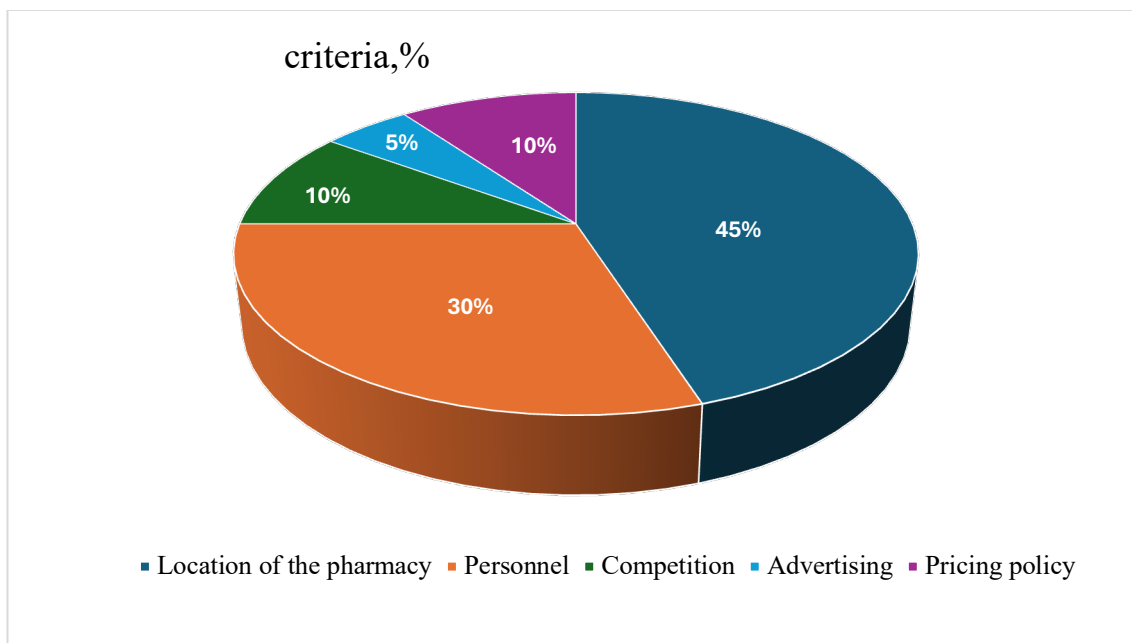


Fig.1.1 Pharmacy success criteria, %

Thus, a comprehensive assessment of all the above-mentioned parameters, their integration and differentiation allow us to assess the degree of management efficiency, the competitiveness of a pharmacy organization, and to structure a system of management decisions to optimize financial and economic activities.

Conclusion 1

The study of the literature allowed us to conclude that at the current stage of development of pharmaceutical activity, the pharmacy performs conceptual functions: health care organization (provision of pharmaceutical care), trade (sale of medicines) and economic (profit making).

The analysis of pharmacy institutions in modern conditions reveals a complex interconnection of economic, personnel, technological and regulatory challenges. Traditional pharmacies are transforming from points of sale of medicines to centers

for the provision of pharmaceutical care, while facing serious pressure from digital platforms and global supply chain crises.

A general analysis of all problems in a pharmacy institution regarding the development of activities reflects the following problems:

1. Pharmacies are now facing chronic staff shortages and severe burnout, which puts enormous pressure on operations.
2. Other major issues include drug supply disruptions, the market can be impacted by shipping issues that can lead to insufficient product sorting for customers.
3. Decreased profitability due to low reimbursement rates for medicines.
4. Increasing administrative workload and the urgent need to adapt to service-oriented digital models.

The business operations of pharmacies are constantly subject to significant changes due to fluctuations in demand for medications and the impact of objective and subjective factors. These changes must be anticipated with maximum accuracy and minimal errors. The profitability of the pharmacy and the reliable supply of medications to the population depend on the accuracy of the forecast.

CHAPTER 2

CHARACTERISTICS OF THE MAIN INDICATORS OF THE ECONOMIC AND FINANCIAL ACTIVITIES OF PHARMACEUTICAL ENTERPRISES

2.1 Key parameters of economic activity

In the process of economic activity of the pharmacy when performing various production operations, daily and systematic study, analysis of accounting data, and the possibility of planning for the future are of great importance. At the same time, he assigns a great role to economic analysis. Economic analysis is a science that studies the economics of pharmaceutical enterprises on the basis of plan indicators, data of operational, accounting and statistical study [32]. It can be carried out both in the whole pharmacy and in its structural subdivisions. Economic analysis occupies an intermediate position between data processing and decision-making, but does not have a direct impact on the quality of the management conclusions made. Preparation and acceptance of the output require a significant economic study, which indicates the ways of real tasks, and the choice of methods and tools for their implementation largely depends on the result of the analysis. For pharmacies, indicators of economic activity related to the quality of products and compliance with licensing conditions are especially important, which directly affects the financial result of the organization as a whole. Economic activity is a systematic process where a combination of resources and effort transforms input data into the creation of a specific product. The final value is the formation of a product, service or work that satisfies the needs of the consumer and generates income (or social effect) [29-32]. Operational processes include a sequence of actions that ensures the life cycle of the product: from production to sale of drugs. The economic efficiency of a pharmacy is evaluated through a group of indicators that reflect its ability to generate profits, manage resources, and remain competitive. The economic analysis of business activity begins

with a comprehensive review of the key indicators that characterize the activities of the enterprise. Therefore, at the next stage of our work, we will consider and determine the key economic indicators of the pharmacy. Operational economic activity is characterized by the main indicators that we presented in figure 2.1 [27,31,32].

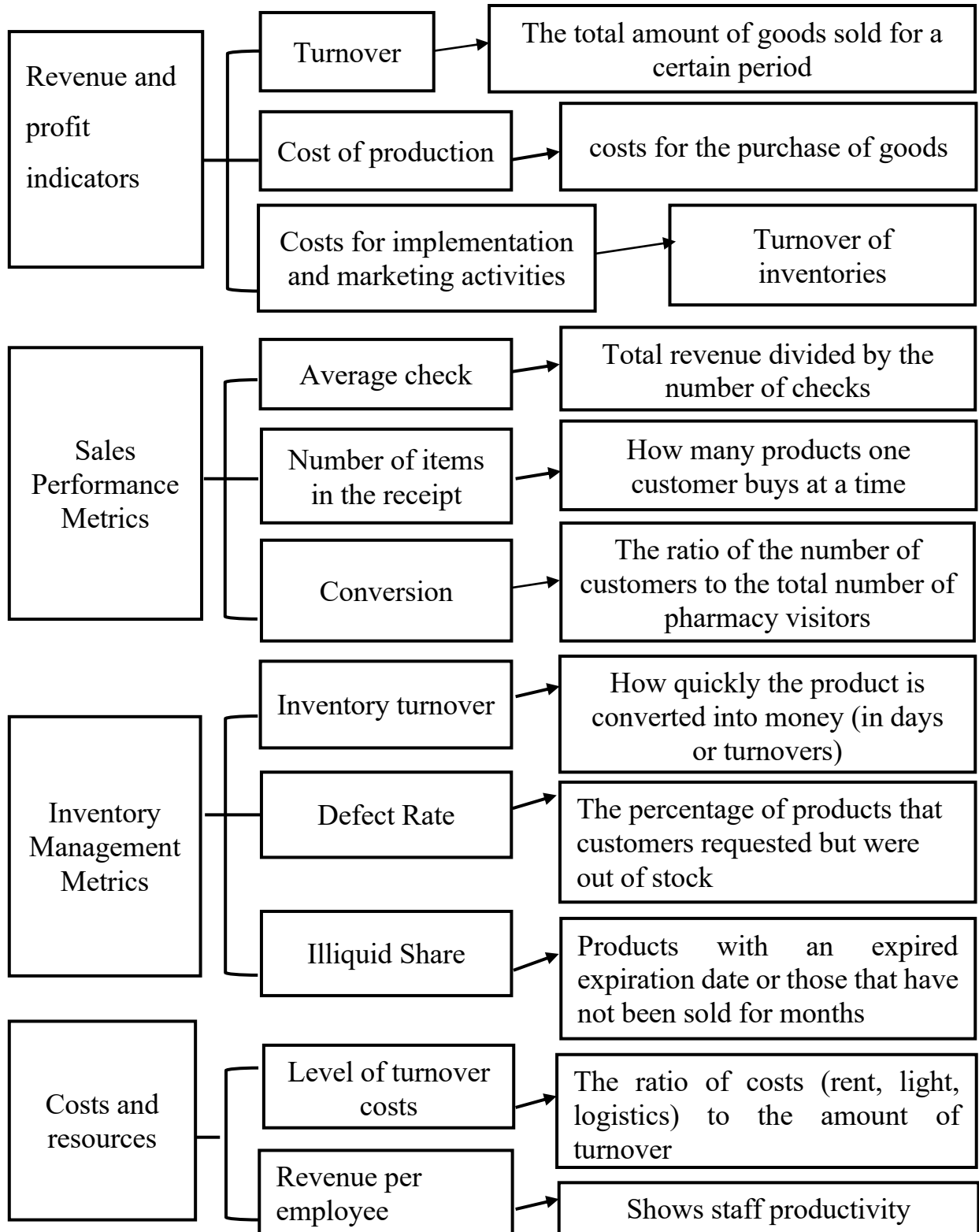


Fig.2.1 Key Performance Indicators and Trends

One of the key indicators of pharmacy efficiency is turnover. It shows the scale of the pharmacy's operations, its income, and the amount of customers' spending on pharmacy goods and services. Turnover not only reflects the volume of sales in money, but also directly indicates the pharmacy's demand, the effectiveness of its assortment management, and its market share.

Studying turnover is a long and painstaking work. It is necessary to analyze its structure, that is, the categories of goods sold, as factors and how they affect it. For example, the volume of retail sales can vary depending on the impact of income, seasonality of diseases, advertising, price dynamics, the use of discount programs and other factors (fig. 2.2) [28,29,32]. The result of the analysis is an action plan to increase sales. It should reflect not only the expected data, but also the reserves that will be needed to achieve them.

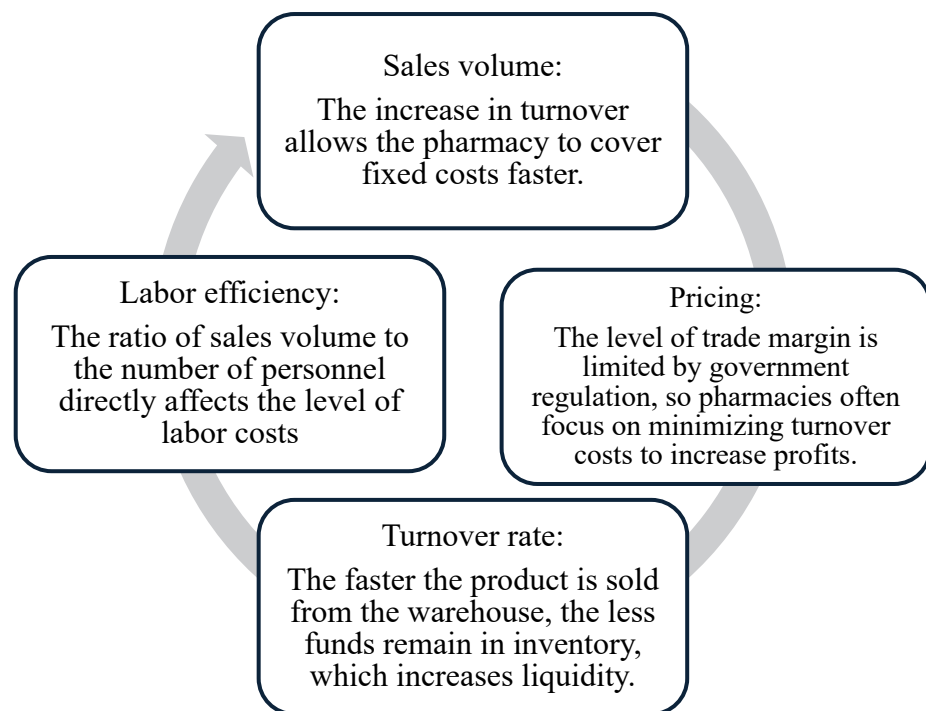


Fig.2.2 Key Influencing factors

When analyzing the economic indicators of a pharmacy, relative and absolute indicators are used. Absolute indicators are expressed in the amount and characterize the volume of the economy.

Relative values reflect the fulfillment of planned indicators, the dynamics of economic activity, its structure, and growth rates.

By form, relative values are divided into: coefficients (comparison of two indicators); percentages (characterize the ratio of values); indices (base - the first indicator of the dynamic series is taken as 100%, and the following are calculated as a percentage of the base and chain, when each indicator of the dynamic series is compared not with the base year, but with the previous year).

Collection and analysis of data on the turnover of a pharmacy is necessary for a pharmaceutical organization, first of all, to assess the results of its activities, as well as to develop and forecast marketing strategies. The need for analysis of the turnover of a pharmacy is also dictated by the fact that the financial condition of the organization, satisfaction of customer demand, the level of turnover costs, gross and net profit directly depend on it. Analysis of retail turnover should also be carried out in terms of individual product groups, i.e. by product structure.

The commodity structure of turnover is the ratio of individual commodity groups in the total volume of turnover (%), if the share of more expensive goods increases, then the volume of their sales in value terms increases and vice versa. According to the principles of pharmaceutical logistics and pharmacy economics, turnover includes the following key stages [28,32]:

1. Identification of the need and formation of the assortment

Analysis of the current demand of the population and forecasting of future needs for medicines.

Selection of suppliers and formation of an order, taking into account the lack of goods.

2. Purchase and receipt of goods

Execution of contracts with distributors and receipt of goods.

3. Storage and Inventory Formation

Inventory management to ensure smooth trade and minimize storage costs.

4. Preparation for sale and display

Labeling of goods and placement in showcases in accordance with merchandising rules and legal requirements.

5. Direct implementation

Making settlements through registrars of settlement transactions and issuing a check.

6. Analysis and planning

Assessment of actual turnover in current and comparable prices. Calculation of inventory turnover and profitability of sales for planning subsequent procurement cycles. Inventories are a complex measure of performance because they contain contradictions.

Firstly, with an increase in turnover, inventories are reduced [32].

Secondly, when sales increase, they should be replenished. That is why there are different methods of inventory planning:

- experimental and statistical;
- economic and mathematical;
- technical and economic calculations.

Modern pharmacy organizations are increasingly building their work not only on general economic indicators, but also on key performance indicators. These metrics allow you to assess the effectiveness of employees, departments and business processes in real time, quickly identify weaknesses and make informed management decisions. The use of these indicators makes pharmacy management more transparent and objective, contributes to increasing the efficiency and profitability of the business. Regular monitoring of these indicators helps not only to identify current problems, but also to build long-term development strategies based on real data.

2.2 Key parameters of financial activity

The financial condition of an enterprise is a set of indicators and data that reflect the ability of the enterprise to repay its debt obligations on time. Material security is assessed during the financial analysis, which allows you to adequately assess the company's economic situation and identify opportunities for further improving the efficiency of the business entity's functioning through rational

financial policy. Financial activity is manifested in the system of forms and methods of accumulation and optimal distribution of financial resources. It characterizes the development and selection of financial mechanisms and criteria for assessing the effectiveness and feasibility of the formation, directions and procedure for using the organization's financial resources [27,31]. In general, the analysis methodology consists of several main stages, which we have identified in (fig.2.3).

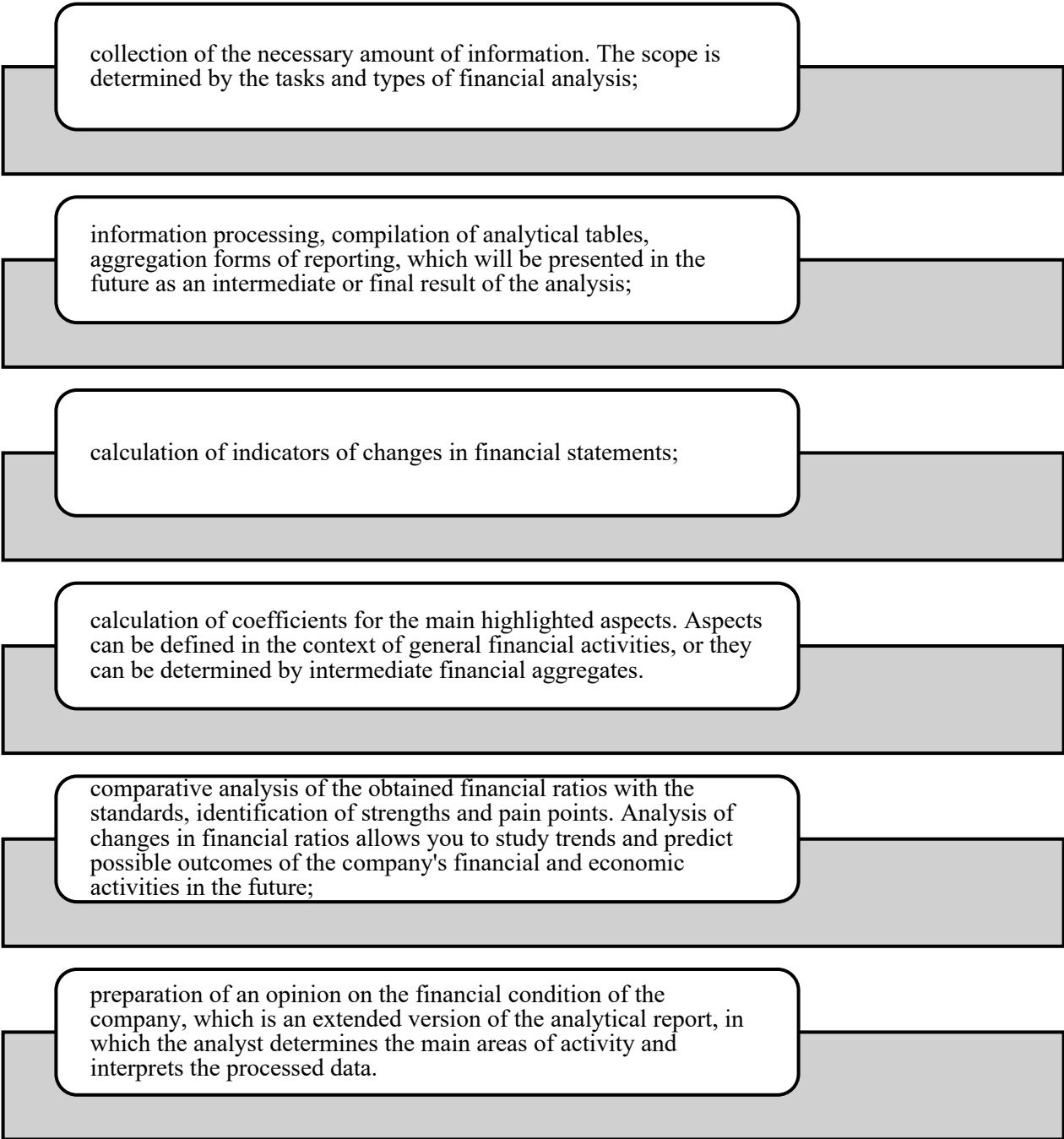


Fig.2.3 Main stages of financial analysis

When analyzing the financial condition of an enterprise, various methods, techniques and models of analysis can be used. The number and breadth of their coverage depend on the specific objectives of the analysis and are determined by its tasks in each specific case. In practice, there are various classifications of methods of economic and financial analysis.

This is a set of scientific and methodological tools and principles for studying the financial condition of an enterprise. In the experience of financial analysis, the following methods are used (fig.2.4) [27,31,32]:

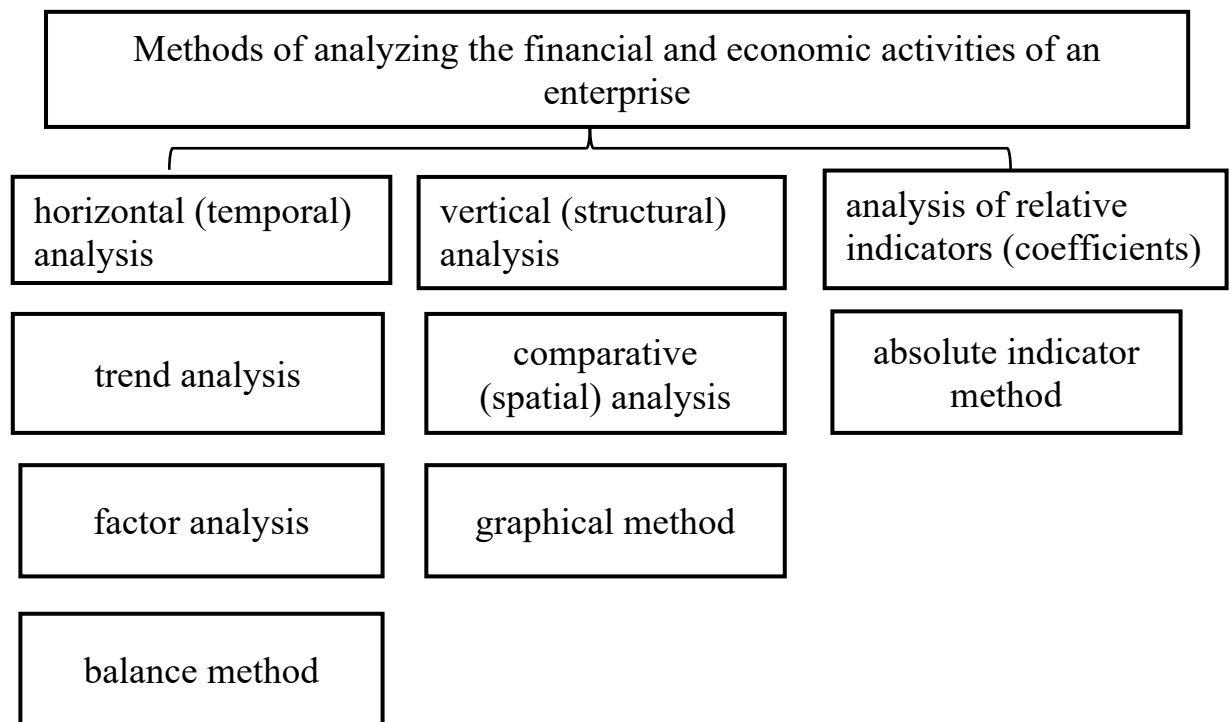


Fig.2.4 Key groups of the analysis method.

The financial and economic activity of an enterprise is defined as a continuous process of attracting various types of resources, combining them in the production process to obtain a certain financial result. In contrast to economic, financial activity assesses the effectiveness of the economic process and reflects cash flows, capital flows, liquidity and final profits [30].

For a complete assessment of the state of the enterprise, liquidity and solvency indicators are used, which show the ability of the enterprise to pay its obligations on

time. Liquidity is a property of the financial and economic system, which is manifested in the ability to quickly sell existing assets to fulfill obligations.

Financial stability reflects the level of dependence on external borrowings and the structure of capital, business activity shows the speed of converting assets into monetary form. Profitability is a key criterion for the efficiency of the financial and economic system, because it is the ability to generate a positive financial result that is most often of interest to managers, owners, and other interested parties [28,31,32]. In this context, indicators of the efficiency of the use of resources (capital, assets, personnel) and profitability of sales are often used.

As a result of economic activity, an enterprise may have a profit or loss - this is a financial result, which is the main generalizing indicator of its work and is determined by the financial results report. Profit is the amount by which income from production and commercial activities exceeds the expenses associated with them, defined as the difference between revenue and the amount of expenses for the production and sale of products. Loss is the excess of the amount of expenses over the amount of income to be received, for which these expenses were incurred.

The main groups of indicators that are used in the study of efficiency and sustainability of financial and economic activities are presented in fig. 2.5 [29,32].

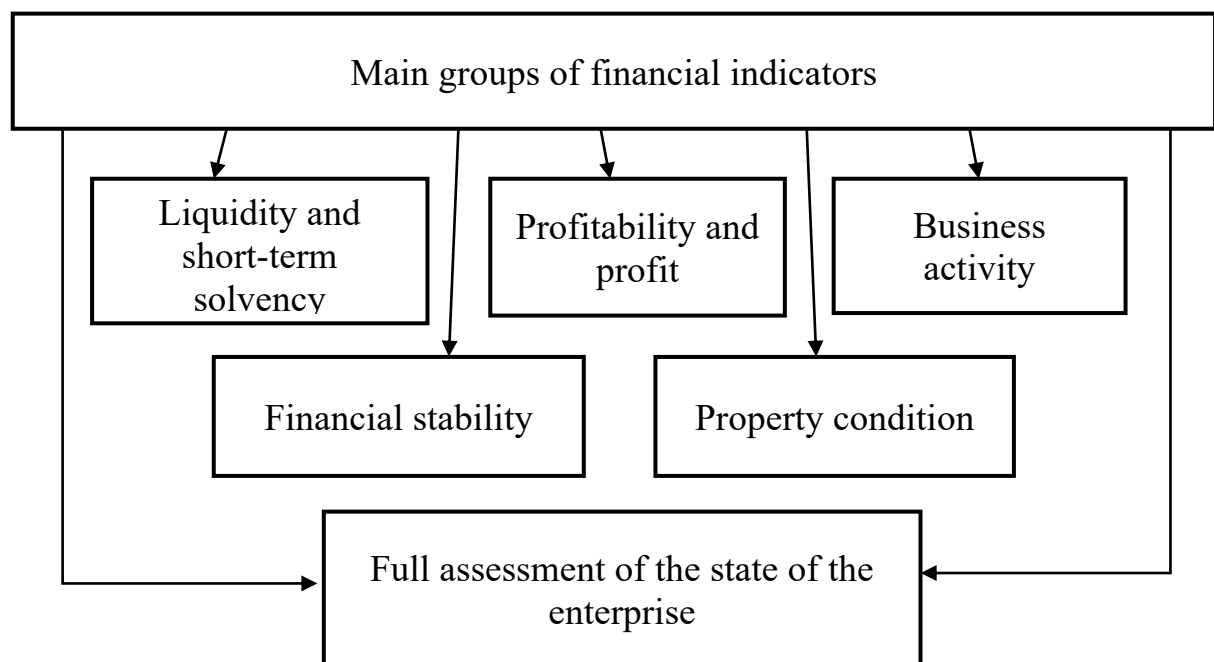


Fig.2.5 Key groups of indicators (coefficients)

Summary information about the results of an organization's activities is called its economic efficiency indicators. They provide an understanding of how stable and competitive the management and economics of a pharmaceutical organization are, allow planning and forecasting further work, and develop a competitive strategy.

The main task of the pharmacy's commercial activity is to care for health by providing the population and healthcare institutions with high-quality medicines while simultaneously generating profit for further development. But profit here is not just a goal, but a resource for updating equipment, expanding the network and improving the skills of staff, which ultimately again works on the quality of patient service. This balance between social mission and business creates a direct relationship with economic indicators, which we have schematically depicted (fig.2.6) [18,29,32].

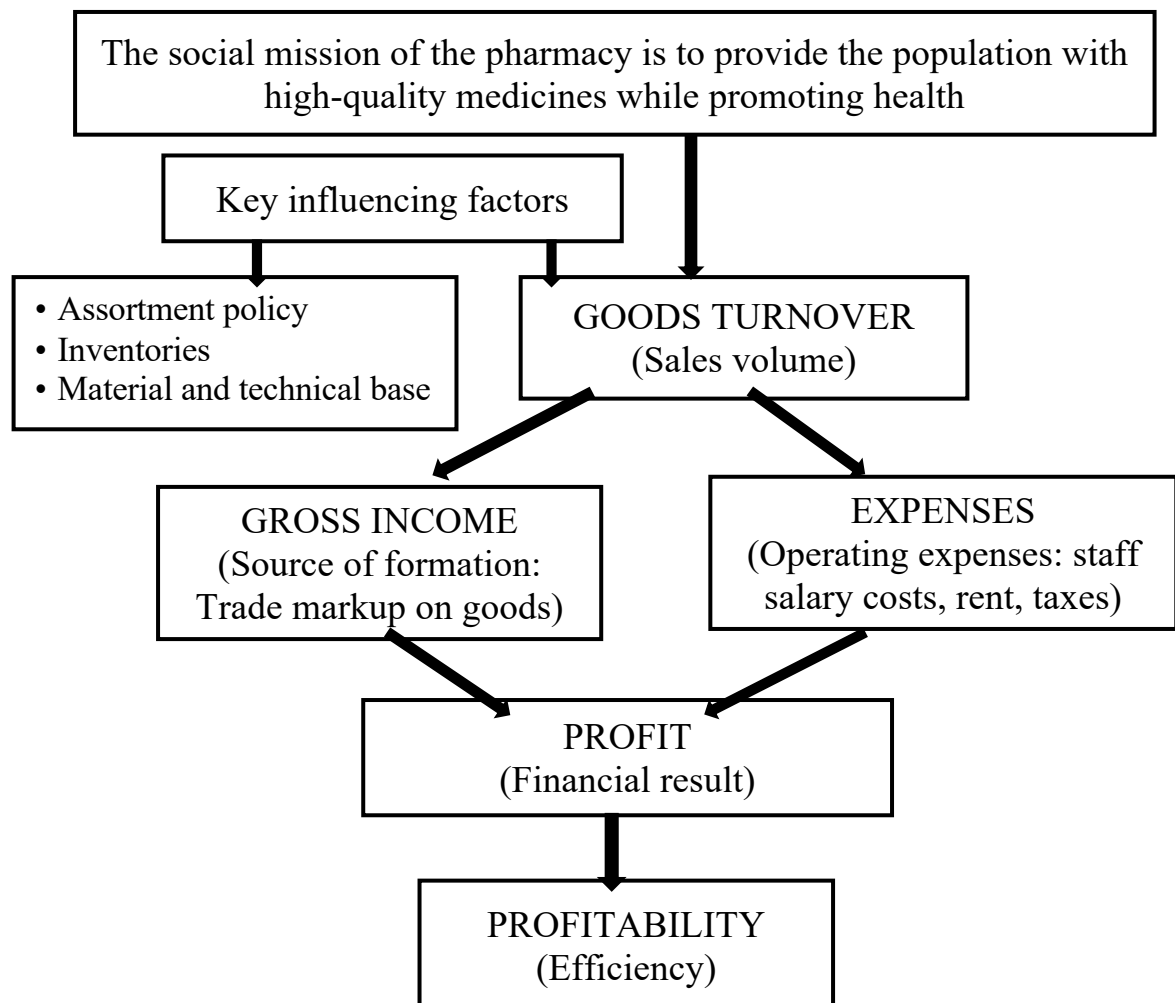


Fig.2.6 Relationship between the main task of trade activity and economic indicators of pharmacies.

Turnover is the main indicator of the fulfillment of the task for a pharmacy. It is the basis for the formation of all other indicators. To maintain the stability of this indicator, the pharmacy must manage the breadth of the assortment, which is directly correlated with the volume of turnover. The wider the assortment and better availability of medicines, the higher the sales volume. It is necessary to maintain an optimal level of stocks to prevent shortages of medicines and ensure the continuity of trade. Compliance of the area and storage conditions with regulatory requirements allows you to carry out activities legally.

Since many medicines are subject to government price regulation (marginal surcharges), the pharmacy must effectively manage purchases to maintain profitability. Gross income is formed at the expense of trade margins on goods, is the main source of covering the pharmacy's operating costs (rent, salaries, utilities) and generating net profit.

This task requires compliance with complex storage conditions (cold chain, licensing requirements), which increases logistical and operational costs.

Profitability is a relative indicator of efficiency, showing the percentage of profit in the volume of turnover. If a pharmacy does not take into account demand or incorrectly forms stocks, its social role suffers due to the lack of working capital. Therefore, the relationship is built on a hierarchical principle, where each subsequent indicator depends on the previous one.

2.3 Digitization of analytics in the pharmacy business

The pharmaceutical sector is one of the most important and complex components of the modern world. The pharmaceutical market is usually very dynamic and sensitive to changes in legislation, economics and competitor research. This is where technological innovation and research provide a huge boost. In such conditions, there is a great need for effective management, decision-making and forecasting of changes [3,13]. The modern pharmacy market requires pharmacy management to perform operational analysis and flexibly respond to changes, and

for this purpose, digital analytical tools are increasingly used. They help to quickly obtain up-to-date data, visualize key indicators and make informed decisions [9].

Data analytics is transforming the modern healthcare industry, and its impact on the pharmaceutical sector is nothing short of groundbreaking. With the ability to collect, analyze, and extract meaningful insights from vast amounts of data, pharmaceutical companies are rethinking how they use patient health information to drive better outcomes, with data analytics becoming essential at every stage of the pharmaceutical product lifecycle. According to analytics, more than 70% of pharmaceutical institutions are demonstrating the rapid adoption of business intelligence and data-driven tools, which helps companies become more competitive. But despite this breakthrough, many organizations are still trying to get clear returns. The problem is not the lack of data, but how effectively it is managed, integrated, and applied. Business intelligence in the pharmaceutical industry performs a number of critical tasks aimed at improving the efficiency of companies and achieving their strategic goals [1,5,9].

Having analyzed modern trends with this topic, it is possible to determine the main advantages in the application of these programs (fig.2.7).



Fig.2.7 Key features of pharmacy analytics software

Digitalization of analytics in the pharmacy business is a transition from manual data collection to automated systems that use artificial intelligence, big data and cloud technologies for real-time decision-making. The benefits for business are obvious, they are increased profitability and reduced costs. Having processed the relevant sources, we have identified several critically important approaches and programs used in the field of pharmaceutical enterprise management in the world [9,17]. The use of analytics in specialty pharmacies, such as Walgreens Specialty Pharmacy, improves treatment outcomes and allows you to achieve adherence rates for cancer treatment of more than 90% [1,11].

Known for its powerful financial analytics tools, the PioneerRx program helps in profit management decisions and forecasts demand using AI. The system is able to analyze large amounts of data to predict the demand for medicines. This allows you to maintain optimal inventory levels, avoid shortages and minimize surpluses [16].

The well-known American company Micro Merchant Systems has launched the PrimeRx program, which offers real-time profitability reports and automated price comparisons from different suppliers to optimize costs [1-5,11].

Daftra is a comprehensive ERP (Enterprise Resource Planning) system that is well-adapted for the pharmacy business. It is a cloud-based system for automating accounting, calculating net profit, and tracking the sales performance of each pharmacist. It helps to track which of the pharmacists makes the largest checks or sells priority categories of goods [1,9,11].

Programs operating on the principles of FEFO (First Expired, First Out) are critical for pharmacy. They help minimize losses from expired goods due to notifications about the approaching expiration date. The system records the production date and expiration date when accepting each batch. Loyalty programs and personalization go through the analysis of purchasing behavior to create targeted offers, which increases the average check [1,9,11].

The "Gaps in Care" analysis is used in hospital pharmacies to help identify patient needs (e.g. vaccination in epidemics) to create new sources of income.

Analytical findings allow you to understand the needs of patients and improve the quality of service, which contributes to increasing the level of customer satisfaction and loyalty to the pharmacy [2,17].

Modern systems provide revenue growth through the presence of functions for digitization of profits and through automatic pricing. This will facilitate control over marginal margins for regulated drugs and help automate price changes when the purchase price changes [9].

Conclusion 2

Based on the results of the study, it can be concluded that the complex analysis of trade and economic activity by various methods will allow to reliably compare and evaluate the financial and economic activities of the pharmacy in time and space, in dynamics, with the establishment of factors that led to this result.

The results of the economic analysis will determine the competitiveness and potential of the pharmacy in business cooperation in terms of trade and economic activity. Also, the conclusions of the financial and economic analysis make it possible to introduce effective management mechanisms financial resources and ensuring their real integration into the system of market relations, as well as to develop a certain financial strategy of the pharmacy.

Economic indicators are a tool that allows a pharmacy to stably perform its pharmaceutical function. Without profit, it is impossible to comply with quality standards, and without high-quality performance of the main task, there will be no customers and income.

It is determined that business intelligence solutions are becoming more popular in pharmacy. Process optimization, improved strategic planning, and increased profits are the benefits that pharmacies get from using business intelligence. With the growth of data volumes and the advancement of technology, these benefits are only growing, helping organizations stay competitive and provide patients with the proper quality of pharmaceutical products and services.

CHAPTER 3

RESEARCH OF PRACTICAL ASPECTS OF THE OPERATION OF PHARMACY ESTABLISHMENTS

3.1 Results of assessment by pharmaceutical workers of the conditions for organizing the formation of inventories

Another area of financial and economic activity is the management of supply chains and operations. This process involves coordinating activities related to the procurement, production and distribution of goods and services [26]. Pharmaceutical institutions are looking to optimize these processes in order to minimize costs and maximize efficiency. In the conditions of intensified competition and the development of market relations, the ability to withstand fierce competition for an advantageous position in the industry, to maintain and create prospects for the future depends on the effectiveness of the formation and management of the product range. In this case, it is important not only to take into account the interests of the manufacturer – to make a profit from the sale of goods and services, but also to ensure that the assortment meets the requirements of the consumer – to maximize demand.

The efficiency of the economic activity of a pharmacy institution largely depends on its policy regarding the assortment. Assortment policy is the process of forming an assortment of goods based on the needs of the market, financial capabilities of the enterprise and its strategic goals. In addition to strategic long-term goals, the assortment policy also takes into account short-term goals related to the concept of seasonality – systematic changes in supply and demand depending on the season [26].

Products in the assortment of pharmacies are divided into basic (with constant demand throughout the year) and seasonal. Basic goods require order-based planning, which depends on the level of sales. Goods of the second group, seasonal,

are associated with increased risk, but at the same time can bring more financial benefits. For seasonal preparations that are subject to significant sales fluctuations, the use of planning methods for the main group may not be effective. Therefore, their purchases need to be planned in advance, determine the size of the inventory and forecast sales, ensuring a balance between supply and demand [32].

Providing the population with the necessary medicines and high-quality pharmaceutical services requires effective establishment of logistics processes within the pharmaceutical supply chain. Pharmaceutical distribution, through the services it provides to community pharmacists, has become an important intermediary in the profession [13].

Pharmaceutical distribution in Morocco is a highly regulated and structured sector, supplying products to nearly 13,000 retail pharmacies. In 2024, it relied on 66 wholesale distributors, providing broad national coverage, although many pharmacies faced geographical disparities and economic difficulties [7,15].

To better understand the expectations of pharmacists regarding the distribution of pharmaceuticals, we conducted a questionnaire on this issue among 100 pharmacists practicing in different regions of Morocco [8,23].

Our study aimed to provide a brief overview of the current state of partnerships between local pharmacists and wholesale distributors and to identify logistical problems, in particular among pharmacy employees.

During the study, we used data from internal accounting of business transactions carried out during 2024-2025 in a pharmacy. All the necessary indicators were taken into account in current prices. At the stage of analyzing the features of the pharmacy's functioning, starting from 06.24.2024, we developed a plan that included the following stages:

- Stage I – conducting a sociological survey of pharmaceutical workers on the effective establishment of the organization of processes within the framework of the formation of inventories;

- Stage II – collection and analysis of information (primary reporting documents) on the main indicators that characterize the trade and financial activities of the pharmacy;
- Stage III – analysis of the main indicators that characterize the trade and financial activities of the pharmacy for 2024-2025, including turnover;
- Stage III – structural analysis of sales volumes and identification of shifts in order to determine the characteristic features of changes in these indicators;
- Stage IV – definition, calculations, analysis of income, expenses, profit and profitability;
- Stage VI – identification of key areas for improving the efficiency of the pharmacy institution in accordance with negative changes.

Generalized results of the survey showed that the respondents are dominated by heads of pharmacies (68 people) and pharmacists (32 people). Most of the respondents have significant work experience, which indicates their experience in the pharmaceutical industry (more than 10 years-39%) (fig.3.1).

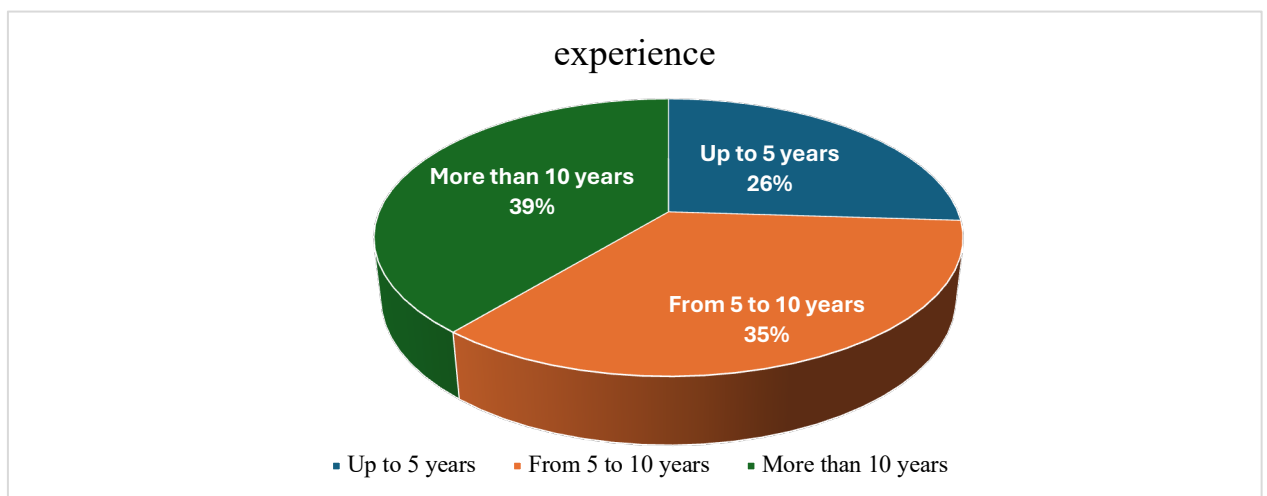


Fig.3.1 How long have you been working in a pharmacy?

Significant results were obtained when studying the logistics operations performed at the enterprise. In particular, respondents noted such operations as assortment management, receipt and accounting of goods, planning and coordination of deliveries in accordance with the needs of the institution. Most respondents also expressed a desire to influence the formation of the assortment in their pharmacy.

The most significant survey results in the field of logistics were obtained for the following question: “What are the main operations with the supply of medicines that you perform in a pharmacy? (multiple answer options can selected)” (fig. 3.2).

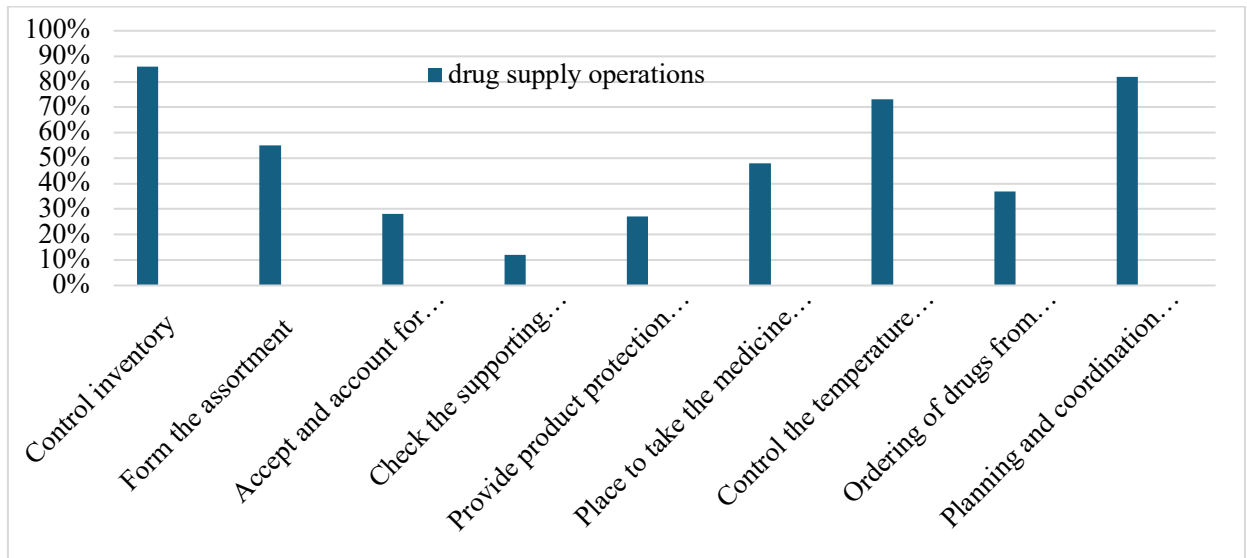


Fig. 3.2 Answers of pharmaceutical workers to the question: “What are the main operations with the supply of drugs that you perform in a pharmacy?”

The frequency of deliveries of medicines to urban pharmacies in Morocco is usually 2-5 times a day, sometimes up to 5 in large cities such as Casablanca or Rabat. This efficiency allows pharmacists to maintain a small supply while ensuring immediate availability of medicines to patients. The answers of pharmaceutical workers regarding the frequency of drug deliveries are shown in fig. 3.3.

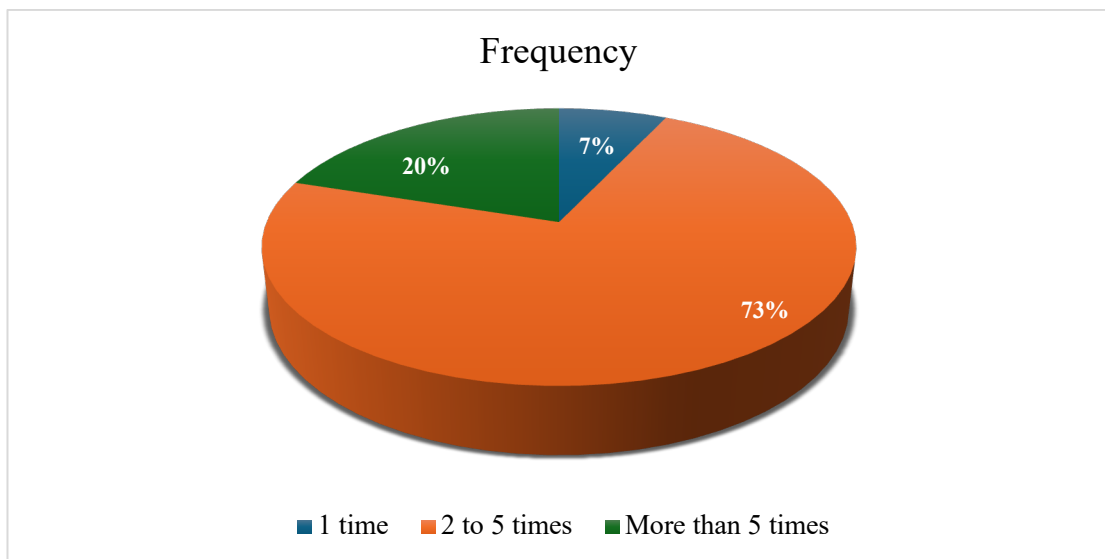


Fig.3.3 How many times a day do you receive deliveries on average?

Daily deliveries are considered optimal for quickly meeting customer needs. It is important, however, to consider that this approach can be a heavy burden on logistics processes and does not always cover costs. However, in rural or mountainous areas, this frequency often drops to one delivery per day or even every two days depending on availability.

Pharmacies in Morocco face frequent shortages of medicines, often essential medicines or medicines for chronic diseases (cancer, diabetes), which creates daily problems for patients. This constant situation is linked to both production and logistical problems. The results show that 55% of respondents have supply problems and, as a result, stock shortages, which negatively affect supply (fig. 3.4).

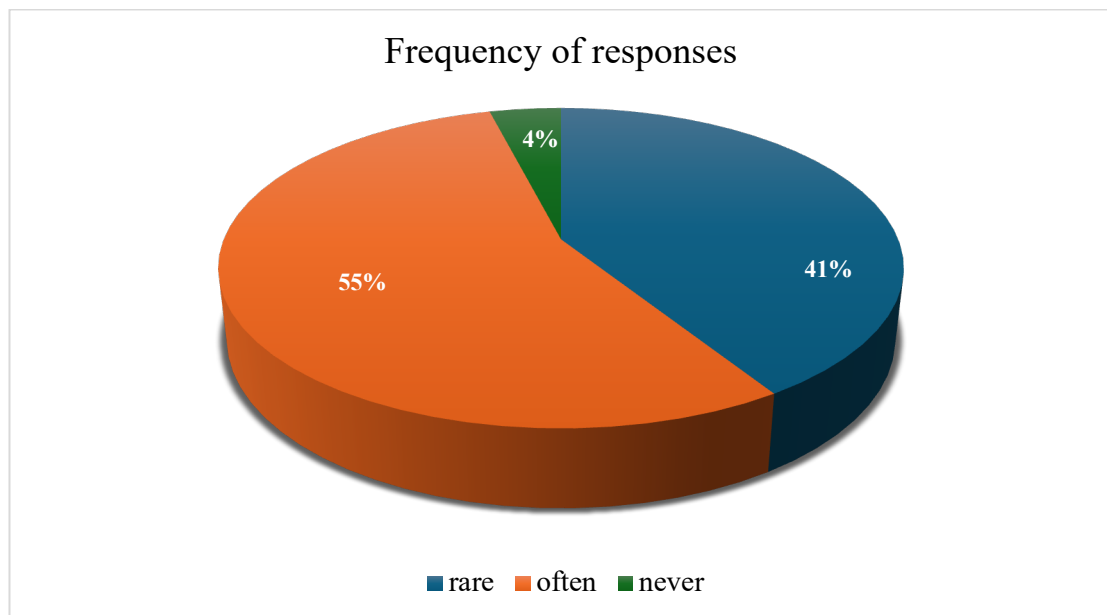


Fig.3.4 Does your pharmacy business often face a shortage of goods in stock?

The quality of services offered by wholesale suppliers in Morocco is generally recognized for its logistical efficiency. However, the sector is experiencing a period of economic instability that is affecting its relationship with pharmacies. The quality of services depends largely on storage capacity to anticipate shortages, which is a constant problem that requires interconnection between the various distribution points. Pharmacists' responses to questions about their satisfaction with the work of distributors showed overall satisfaction with the services. Pharmacists were most satisfied with the work of the delivery driver (73%) and the quality of packaging and

transportation of medicines (53%). Supply to pharmacies in Morocco is ensured by a system of night, weekend and holiday shifts provided by the wholesaler during the shift. Pharmacists were most dissatisfied with the quality of continuity of service (23%). (fig.3.5).



Fig.3.5 Are you satisfied with the quality of the services provided by your wholesaler?

In Morocco, commercial terms between distributors and retail pharmacies are strictly regulated, although market practices affect the cash flow of pharmacists [23]. In 2024-2025, pharmacists paid their suppliers with an average payment period of 90 days, thus wholesalers effectively finance the working capital of pharmacies.

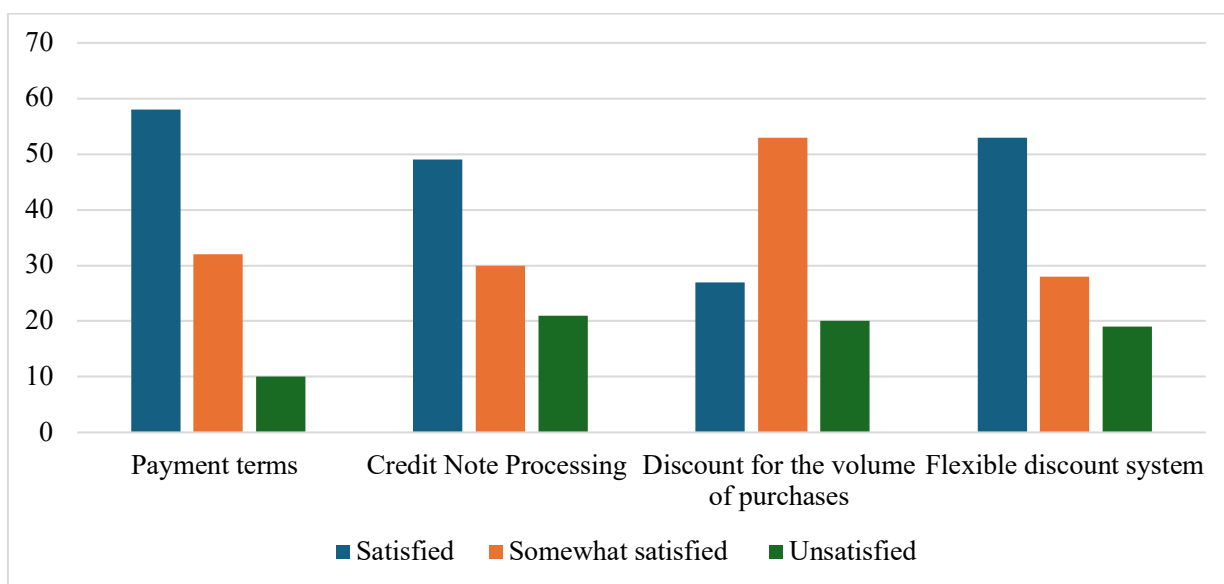


Fig.3.6 Are you satisfied with the commercial terms offered by your wholesaler?

Pharmacies' satisfaction with wholesale suppliers is mixed: while logistical reliability is perceived positively, the decline in trade discounts and economic conditions is creating tensions (fig. 3.6). Faced with economic pressures, pharmacists are looking for more profitable partnerships, seeking to optimize their purchases while ensuring timely delivery. New rules on payment terms (Law 69-21) set a limit of 60 days (in the absence of an agreement) or a maximum of 120 days (in the event of an agreement) to combat payment delays.

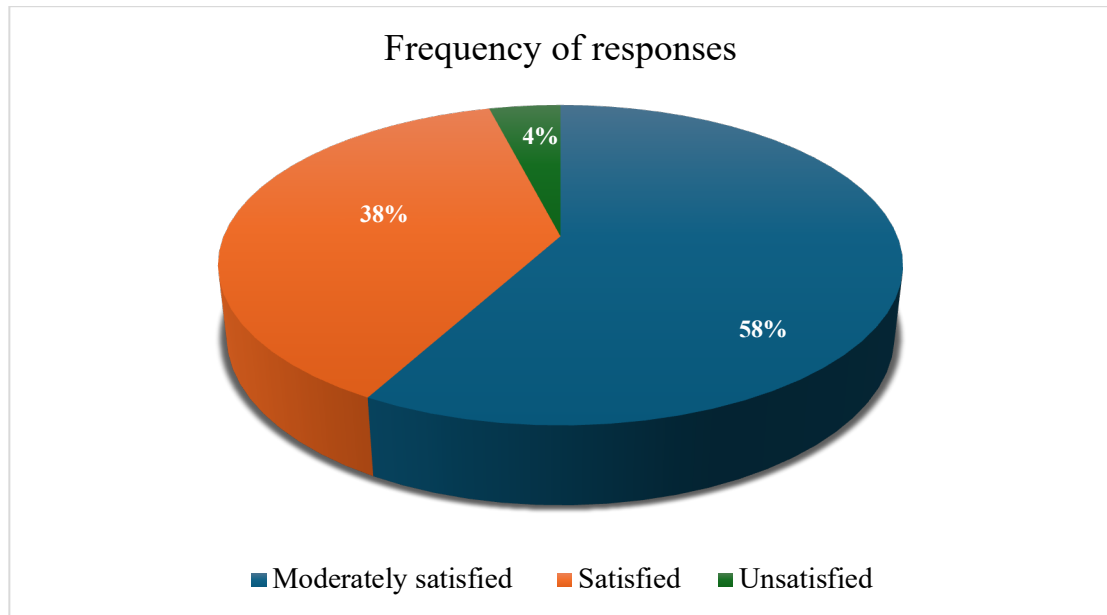


Fig.3.7 Are you generally satisfied with the services offered by the wholesalers you work with?

Despite the positive responses of pharmacists, the majority of respondents (58%) are partially satisfied with the work of wholesale companies, although several weaknesses can be identified (fig.3.7). The financial instability of pharmacies leads to the fact that wholesalers indirectly finance the working capital of pharmacies (payment terms often exceed three months), which weakens their own profitability. Around 4,000 pharmacies in Morocco are considered to be in financial distress, threatening the sustainability of this supply chain. The findings highlight the difficulties that retail pharmacists face in distributing medicines and ensuring adequate pharmaceutical care for patients. Due to the difficult conditions associated with the consistent reduction of drug prices, distributors offer intensive logistics to

pharmacies in order to retain pharmacy customers. Retail pharmaceutical companies and their partners need to actively consider new strategies to improve and accelerate logistics processes in the drug supply chain.

3.2 Results of the analysis of the main indicators characterizing the trade and financial activities of the pharmacy for 2024-2025

Analysis of financial and economic activities of pharmaceutical enterprises is an important task. To do this, it is necessary to consider in detail the factors that affect the work of pharmacies and develop strategies to improve these indicators in order to improve the quality of pharmaceutical care. The main tasks of the economic analysis of the financial condition of the pharmacy are an objective assessment of the use of financial resources, identification of internal reserves to strengthen the financial condition and improve relations with various financial, credit and control bodies [31].

Organizational and economic characteristics of the enterprise

Pharmacy "Schal" is a private pharmacy located in Casablanca, created to carry out financial and economic activities and is known for its high rating. Pharmacy "Schal" is a legal entity, has an independent balance sheet, a bank account, a round seal with its name, a stamp, letterheads, the name of the company and a trademark. Pharmacy working hours: open from 09:00 to 19:00 (Monday to Saturday), closed for a break.

To find out about the efficiency of the institution's production, it is necessary to analyze the main indicators of the enterprise's activity. To determine the revenue from the sale of products and the cost of production, we used the "Profit and Loss Statement of the pharmacy" (for the 1-3rd quarter of 2024-2025), the difference between these two indicators allows us to calculate the gross profit of the pharmacy, which is a key indicator of the effectiveness of its trading activities.

Based on the data of Fig. 3.8 It can be noted a decrease in turnover during the first quarter of 2024, from 277624 thousand dirhams (MAD) up to 236579 thousand

MAD, representing a fall of half (fig.3.8). The constant opening of new pharmacies contributes to the redistribution of revenues, increasing the pressure on the income of well-known pharmacists.

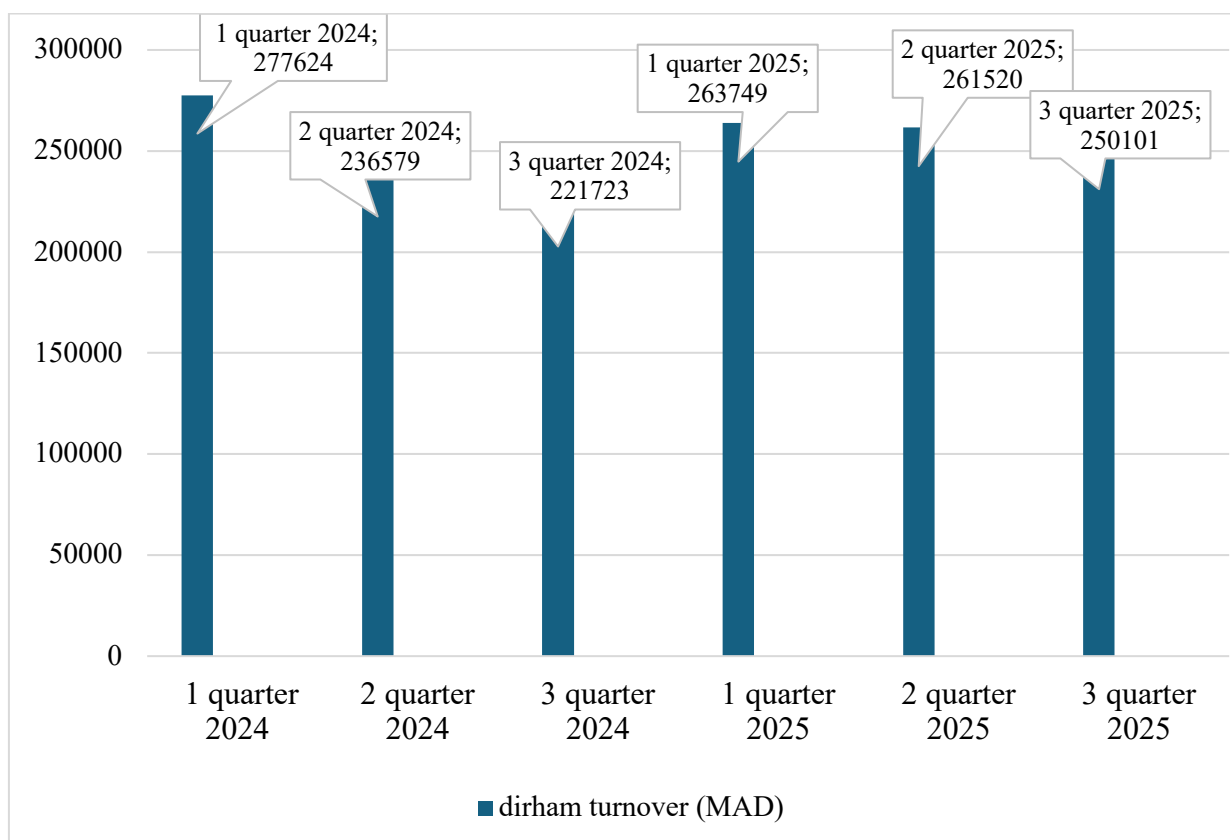


Fig.3.8 Results of the analysis of the dynamics of changes in turnover indicators for the I-III quarters of 2024-2025 in a pharmacy

In the third quarter, the turnover changed to another 221723 thousand tons. IAD, has not reached the indicators of the first quarter of 2024. It is important to note that during the I-III quarters of 2025, there was a systematic decrease in sales of drugs and other products of the pharmacy assortment.

In 2024-2025, the average annual income of a retail pharmacy in Morocco was approximately 940,000 to 1.1 million dirhams (MAD). This average is decreasing due to the increase in the number of pharmacies.

Until 2025, the core business of pharmacies in Morocco was characterized by stagnant professional incomes, despite the overall growth of the market, mainly due to the decline in regulated drug prices and the increase in operating costs [8,20-23].

Having analyzed the turnover of the pharmacy by volume, we can conclude that there is a strong concentration on inexpensive drugs (fig.3.7-3.8). Products in the lowest price category (Level 1) with a selling price below DH 278 accounted for 89.9% of sales, of the total number of boxes sold, which constitutes the main business of pharmacies. Cost of sales: In terms of revenue, this represents 79.4% of the market.

Level 2 (Price between DH 278 and DH 588): puts only 4.7% of the sales volume, but 5.4% of the total market value.

Price Tiers 3 and 4 (Price > DH 929): These categories include the most expensive medicines. Although they only represent about 3.2% and 2.3% of the volume, they cover 15.2% of the market value (6.7% for Category 3 and 8.5% for Category 4) for 2024 (fig.3.9).

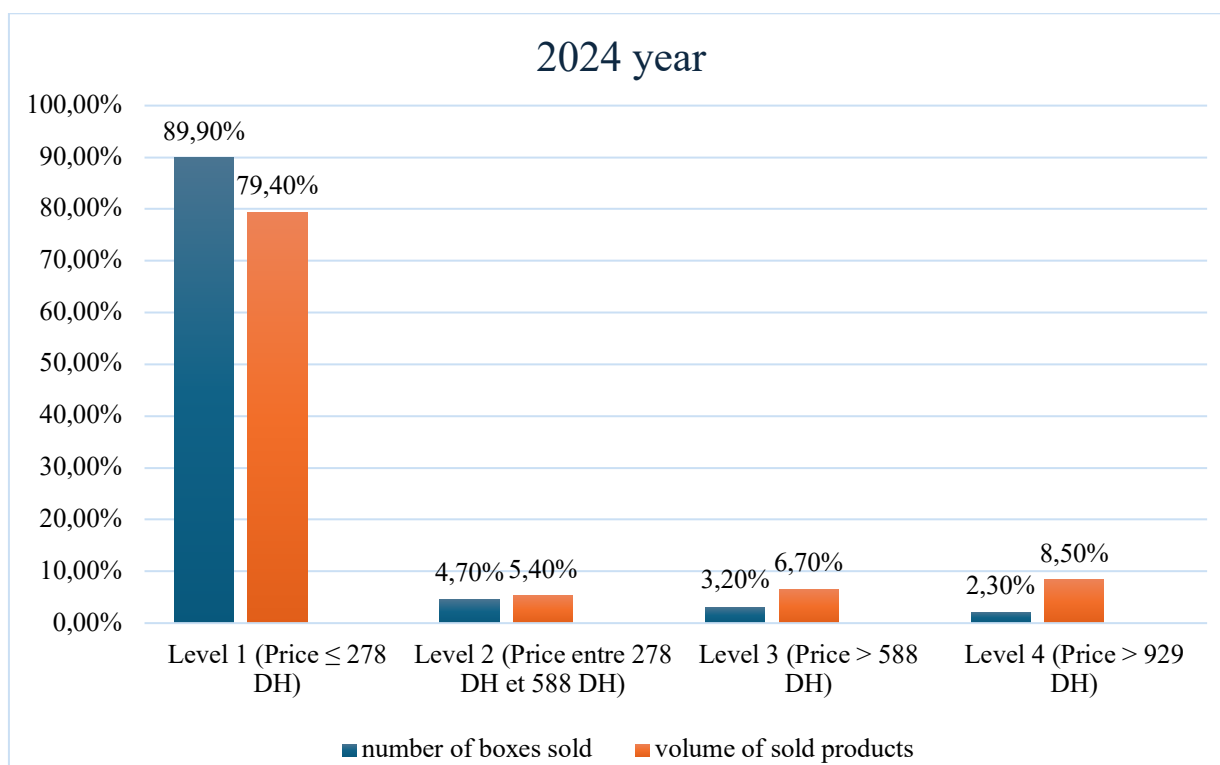


Fig.3.9 Share of quantity and volume of goods by price category for 2024

The analysis of turnover by quantitative and cost characteristics for 2025 in the 3rd quarter showed a slight change in indicators. Expensive medicines make up the main cost share of the total turnover in comparison with quantitative

characteristics. At the first and second levels 1:1, at the third and fourth 2:2.5 and 1:5.5 respectively (fig.4.0).

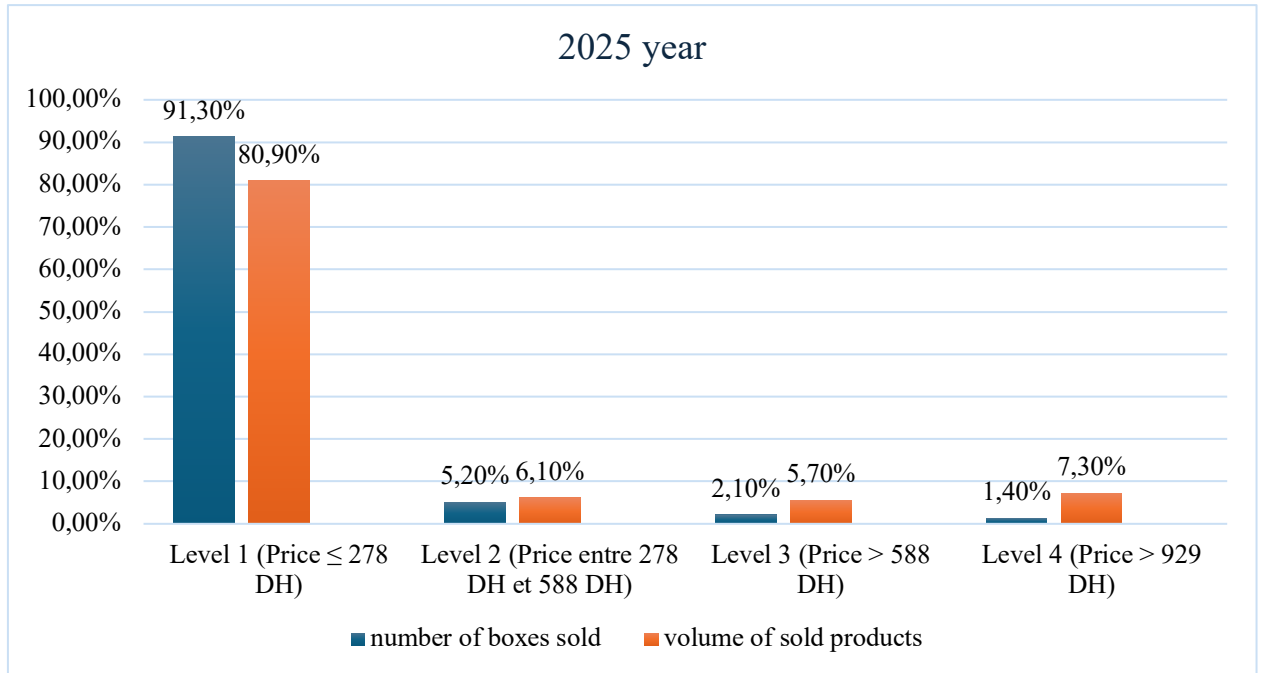


Fig.4.0 Share of quantity and volume of goods by price category for 2025

This discrepancy can be explained by several structural factors. First, profit margin pressures remain high, largely due to the regulation of drug prices established by the decree and the consistent price reductions for some essential goods, especially in the T1 and T2 price categories. Medicines in the T1 category, whose maximum public price is set at AED 166, account for 92% of sales volume and almost 80% of their value. The T2 category, whose prices range from AED 166 to AED 588, also has low markups.

The analysis of the indicators of trade overlays and costs of goods turnover in the pharmacy for the period of the I-III quarters of 2024 and 2025 indicates significant changes in the financial activities of the pharmacy institution.

Fig. 4.1 shows the wave-like nature of changes in indicators during the period under consideration. The decrease in pharmacy turnover for 2025 did not affect the size of trade overlays, but turnover costs increased (fig.3.9). This situation indicates serious pressure on the profitability of the pharmacy business. This may be due to the influence of external factors, such as economic instability and changes in the

regulatory environment. A detailed analysis of these changes can help to understand how they affect the financial security of the pharmacy.

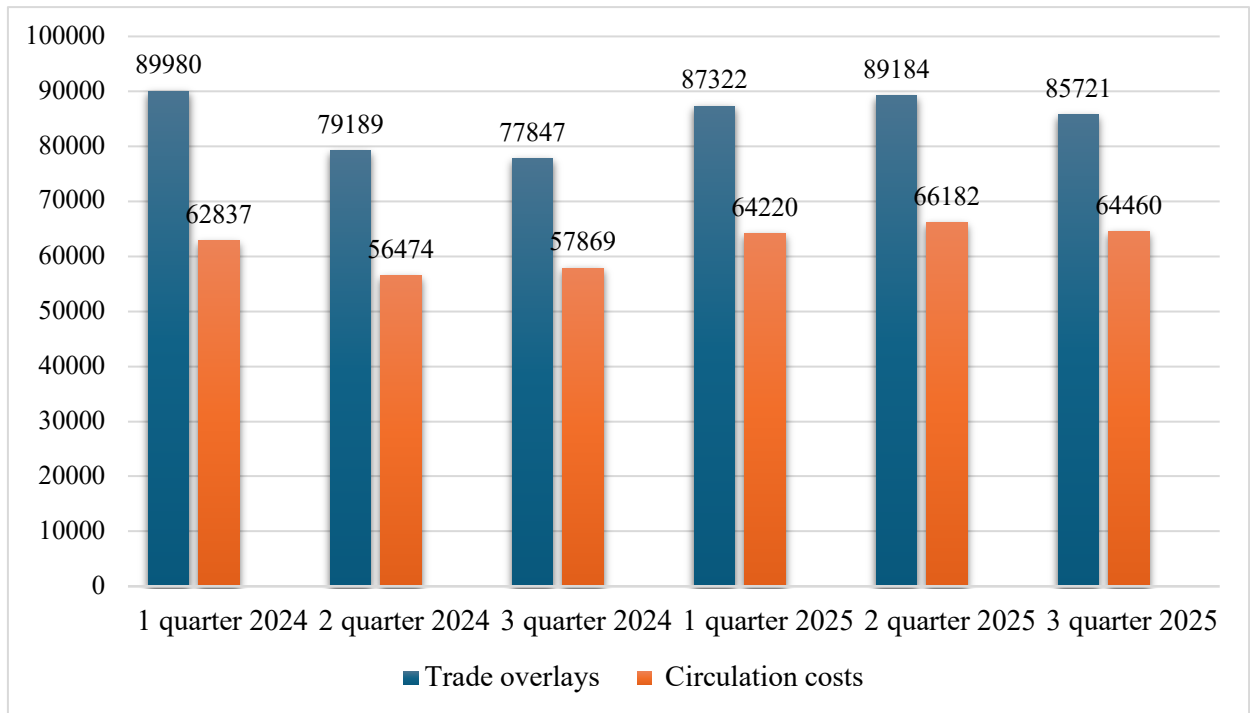


Fig. 4.1 Analysis of the dynamics of changes in the indicators of trade surcharges and expenses from the main activity in a pharmacy (I-III quarters 2024 -2025)

If the size of trade overlays has not changed, and the turnover has fallen, the pharmacy receives less gross income in absolute monetary terms, which we see in Figure 3.10. Rising operating costs for rent, logistics, and utilities amid falling sales creates such a picture. Net profit on average decreased by 1.5% over the past year. As fixed costs are now spread over a smaller volume of goods sold, the cost of maintaining a pharmacy increases. During the analysis, it can be seen that the profit of the pharmacy had heterogeneous dynamics. In the first quarter of 2025, there was a noticeable decrease in the profit of the pharmacy (23102 MAD), compared to the 1st quarter of 2024 (27143 MAD).

These changes in the profit of the pharmacy can be associated with various factors, such as fluctuations in drug prices, competitive situation in the market, changes in the costs of pharmacy management and other factors of the internal and external environment.

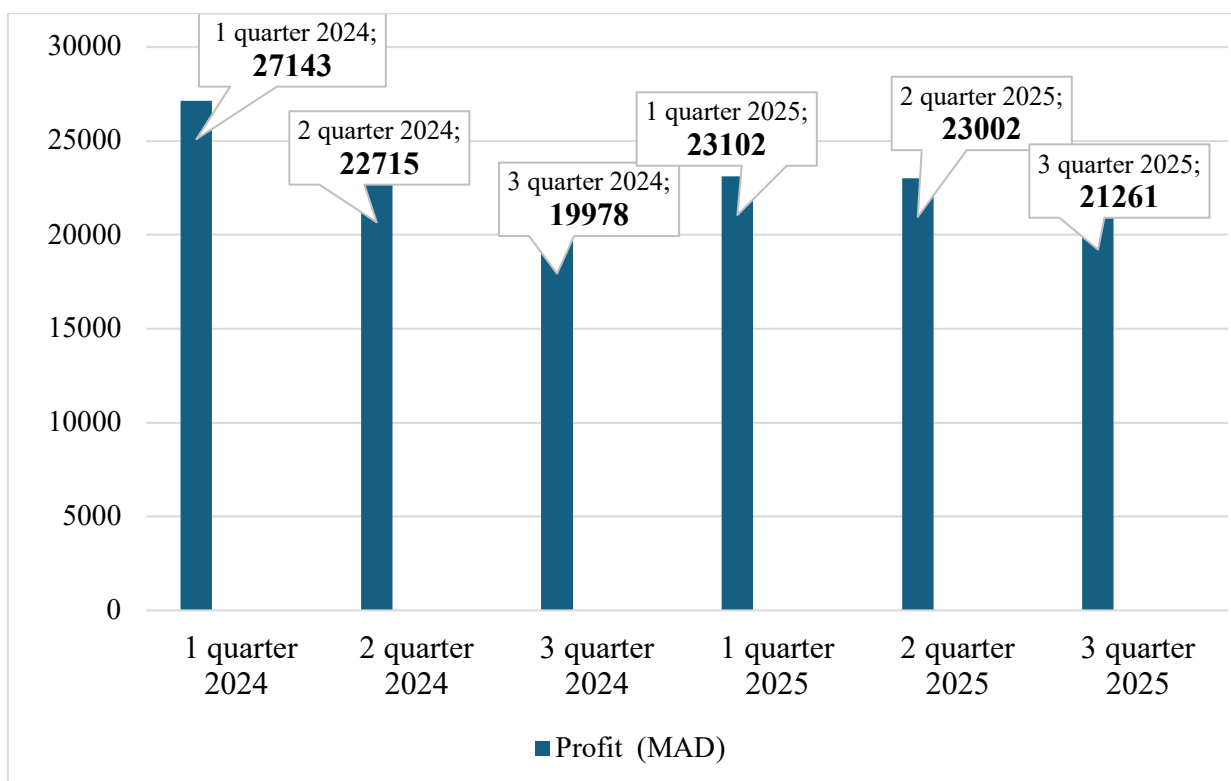


Fig. 4.2 Analysis of the dynamics of changes in profit indicators from the main activity in a pharmacy (I-III quarters of 2024 and 2025, respectively)

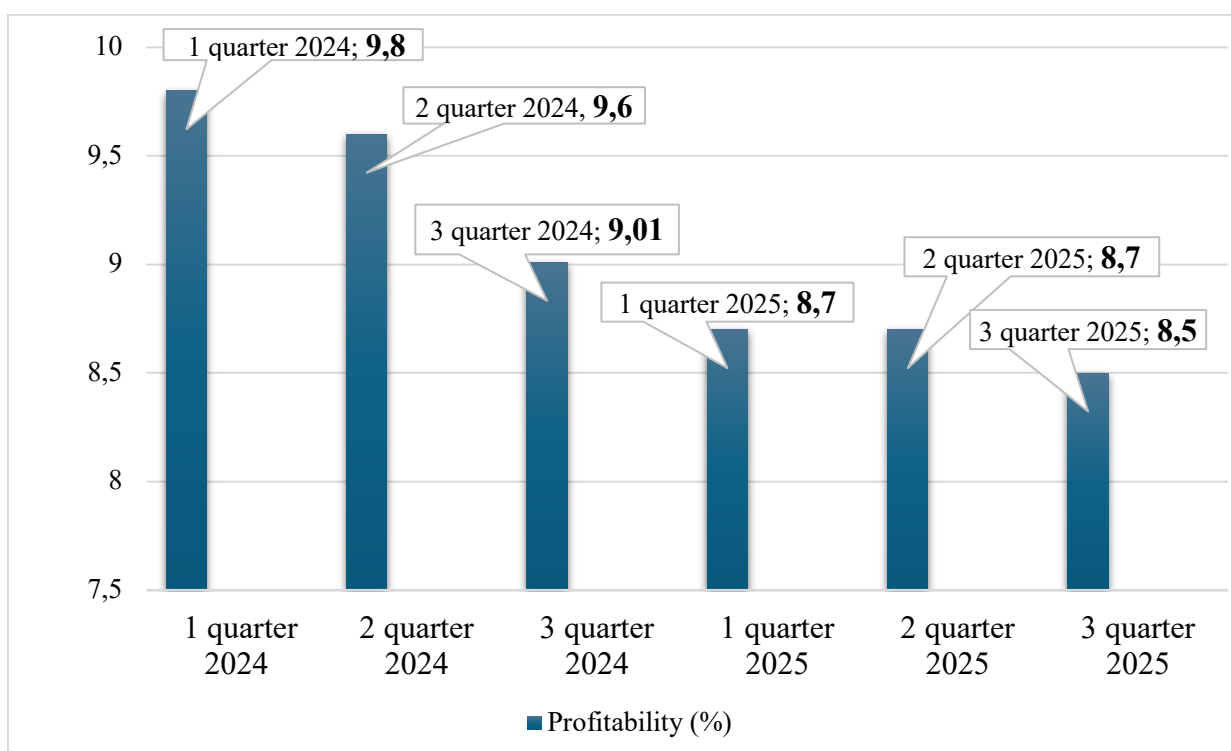


Fig. 4.3 Analysis of the dynamics of changes in profitability indicators (%) from the main activity in a pharmacy (I-III quarters 2024-2025)

Figure 4.3 shows the dynamics of changes in the pharmacy's profitability index from its main activity during the first-third quarters of 2024 and 2025. The profitability index reflects the efficiency of resource use and profit generation from the pharmacy's main activity. In the third quarter of 2025, the profitability index decreased to 8.5%, which occurred in parallel with the decrease in profit.

This is due to the fixed markup on medicines, where for expensive medicines (e.g. costing 3000 DH), the pharmacist receives a fixed fee (approximately 300 DH), which reduces the gross margin to approximately 8% for these specific products. The average gross operating margin is approximately 8.6%, which is a weakness that can weaken the financial structure of the pharmacy. The average gross margin has been between approximately 9.8% and 8.5% of sales after tax over the past two years [8,23].

Conclusions to chapter 3

Priority areas for improving the sustainability and reliability of the supply chain are identified. The results highlight the importance of optimal assortment management, including product assortment formation and supply planning, the role of pharmacists in assortment formation, and this reflects their willingness to influence this process. It is noted that the frequency of drug deliveries to urban pharmacies in Morocco is typically 2-5 times a day, indicating the importance of rapid deliveries to meet consumer needs.

The pharmaceutical sector is estimated to consist of approximately 66 distribution centers serving nearly 14,117 pharmacies. The service is regulated by best distribution practices to ensure product integrity until delivery to the pharmacy.

According to the employee survey, the majority of pharmacies (55%) are experiencing supply chain issues and, as a result, stock shortages, which negatively impact supply.

An analysis of the financial and economic activities of pharmacy establishments showed that there was a significant decrease in turnover during the

first and second quarters of 2024, which was determined by a drop from 277,624 MAD to 221,723 MAD. In the first quarter of 2025, turnover recovered to 263,749 MAD, but did not reach the indicators of the first quarter of 2024. A trend towards a decrease in retail sales of goods was identified in the second and third quarters of 2025. This decrease is largely due to an increase in the number of recently opened new pharmacies.

The dynamics of product revenue and cost have been shown to be wave-like, which can be driven by external factors such as economic volatility and changes in the regulatory environment. This distribution pattern of revenue and cost encourages pharmacists to favor low-cost products, as more expensive drugs require significant investment and carry risks related to expiration or breakage, while offering a limited fixed mark-up. Even within Tier 1, the cheapest drugs, priced up to MAD 278, account for 91.3% of sales but only 80% of total value, highlighting the fragility of the mark-up-driven business model.

It is determined that the average total gross margin fell from 9.8% in 2024 to 8.7% in 2025. This decline, combined with an increase in operating expenses of 1.6% between these years, threatens the profitability of pharmacies. The retail chain, subject to strict regulatory restrictions and experiencing a gradual decline in its profitability.

GENERAL CONCLUSIONS

1. Analysis of literary sources allowed us to determine the specifics of the pharmacy's economic activity and identify the features of functioning in a market environment.
2. The main indicators of the operational and economic activities of pharmaceutical enterprises are characterized. Specific features are determined, due to the high scientific component, strict state regulation and social significance of pharmaceutical products. The relationship between indicators characterizing the commercial activity of a pharmacy is shown, which is based on a systematic combination of sales, resources and financial results. The integrating indicator is turnover, which determines the need for resources and forms the income part.
3. Based on the analysis of specialized literature and conducted research, it was determined that the global market for commercial pharmaceutical analytics was estimated at \$5.16 billion in 2024 and is projected to reach \$18.49 billion by 2031, reflecting significant growth in the sector. By implementing digitalization systems, companies will be able to transform large amounts of data into strategic decisions to improve operational efficiency. By using the latest business intelligence technologies, pharmaceutical companies are improving their operations and decision-making capabilities.
4. A sociological survey was organized and conducted to assess the conditions for organizing the supply of medicines and the problems of stockpiling by pharmaceutical workers.
5. An analysis of the main indicators characterizing the pharmacy's commercial and financial activities for 2024-2025 was conducted and the main trends and problems that must be taken into account when developing a strategy to optimize and increase the financial stability of the pharmacy in the market were identified.
6. After examining the pharmacy reports, it can be concluded that the combination of rising operating costs, regulatory constraints, low profit margins, and delayed payments is putting significant economic pressure on Morocco's pharmacy sector, threatening the viability of thousands of outlets across the country.

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National University of Pharmacy

Pharmaceutical faculty
Department of social pharmacy
Level of higher education master's
Specialty 226 Pharmacy, industrial pharmacy
Educational and professional program Pharmacy

APPROVED
The Head of Department
of Social Pharmacy

Alina VOLKOVA
“05” of September 2025

ASSIGNMENT FOR QUALIFICATION WORK OF AN APPLICANT FOR HIGHER EDUCATION

Rida ZAKARIA

1. Topic of qualification work: « Analysis of economic indicators of trade and financial activities of pharmacy establishments», supervisor of qualification work: Lyubov TERESHCHENKO, PhD, associate professor, approved by order of NUPh from “06” of October 2025 № 266
2. Deadline for submission of qualification work by the applicant for higher education: May2026 year.
3. Outgoing data for qualification work: authors' publications; media publications; official health sites; State Statistics Service of the world; sites of WHO, IFD, Internet, etc.
4. Contents of the settlement and explanatory note (list of questions that need to be developed): analyze the theoretical foundations of the functioning and regulation of pharmacy activities; determine the key parameters of the economic and financial activities of pharmacies; conduct a survey among pharmaceutical workers; conduct an analysis of the pharmacy's sales performance for 2024-2025.
5. List of graphic material (with exact indication of the required drawings):
Tables – 2, schemes – 22.
6. Consultants of chapters of qualification work

Chapters	Name, SURNAME, position of consultant	Signature, date	
		assignment was issued	assignment was received
1	Lyubov TERESHCHENKO, associate professor of higher education institution of department of social pharmacy	11.09.25	11.09.25
2	Lyubov TERESHCHENKO, associate professor of higher education institution of department of social pharmacy	21.11.25	21.11.25
3	Lyubov TERESHCHENKO, associate professor of higher education institution of department of social pharmacy	24.12.25	24.12.25

7. Date of issue of the assignment: «05 » of September 2025 year.

CALENDAR PLAN

№ з/п	Name of stages of qualification work	Deadline for the stages of qualification work	Notes
1	Analysis of scientific, periodical literature on the topic of qualification work	September 2025	done
2	To characterize the main indicators of economic and financial activity of pharmaceutical enterprises	October – November 2025	done
3	Conduct a survey among pharmaceutical workers on the conditions for organizing stockpiling	December – January 2025 – 2026	done
4	Conduct an analysis of the main indicators characterizing the pharmacy's commercial and financial activities for 2024-2025	February – March 2026	done
5	Registration of a qualification work according to the general requirements	April 2026	done
6	Preparation of the report and multimedia presentation in official protection of a master's thesis	May 2026	done

An applicant of higher education _____ Rida ZAKARIA

Supervisor of qualification work _____ Lyubov TERESHCHENKO

ВИТЯГ З НАКАЗУ

По Національному фармацевтичному університету

«06» жовтня 2025 р.

№ 266

Фармацевтичний факультет

Затвердити теми кваліфікаційних робіт здобувачам вищої освіти 5 курсу 2025-2026 н. р., група ФМ21(4,10д)англ-01, освітньо-професійна програма «Фармація», спеціальність «226 Фармація, промислова фармація», галузь знань «22 Охорона здоров'я», рівень вищої освіти другий (магістерський), денна форма здобуття освіти, термін навчання 4 роки 10 місяців, мова навчання англійська.

Прізвище, ім'я здобувача вищої освіти	Тема кваліфікаційної роботи (українською мовою)	Тема кваліфікаційної роботи (англійською мовою)	Керівник кваліфікаційної роботи	Рецензент кваліфікаційної роботи
Кафедра соціальної фармації				
Ріда Закарія	Аналіз економічних показників торговельно-фінансової діяльності аптечних закладів	Analysis of economic indicators of trade and financial activities of pharmacy establishments	доц. Терещенко Л. В.	доц. Бондарева І. В.

Підстава: подання декана фармацевтичного факультету доцента Олександра ГОНЧАРОВА

Ректор
Вірно. Секретар



ВИСНОВОК
експертної комісії про проведену експертизу
щодо академічного плагіату у кваліфікаційній роботі
здобувача вищої освіти
«21» квітня 2026 р. № 333639510

Проаналізувавши кваліфікаційну роботу здобувача вищої освіти ЗАКАРІЯ Ріда, групи Фм21(4,10д)англ-01, спеціальності 226 Фармація, промислова фармація, освітньої програми «Фармація» очної (денної) форми здобуття освіти на тему: «Аналіз економічних показників торговельно-фінансової діяльності аптечних закладів / Analysis of economic indicators of trade and financial activities of pharmacy establishments», експертна комісія дійшла висновку, що робота, представлена до Екзаменаційної комісії для захисту, виконана самостійно і не містить елементів академічного плагіату (копіляції).

Заступник голови Комісії,
заступник директора інституту
в складі ЗВО ННПФ,
доцент



Олена НОВОСЕЛ

REVIEW

of scientific supervisor for the qualification work of the master's level of higher education of the specialty 226 Pharmacy, industrial pharmacy

Rida ZAKARIA

on the topic: «Analysis of economic indicators of trade and financial activities of pharmacy establishments»

Relevance of the topic. The financial condition of an enterprise is characterized by a set of indicators that reflect the process of formation, allocation and use of its financial resources. In a market economy, the financial condition of an enterprise essentially reflects the results of its activities. It is the final results of the enterprise's activities that affect the quality of pharmaceutical care provided to the population and the level of availability of medicines in pharmacies. Therefore, an analysis of the financial and economic activities of a pharmaceutical enterprise is relevant.

Practical value of conclusions, recommendations and their reliability. The practical value of the work lies in identifying financial indicators used to assess current profitability and resource management efficiency. Based on the results of the research, conclusions and recommendations were made regarding increasing the level of pharmaceutical provision for the population in Morocco.

Assessment of work. The graduate student demonstrated analytical thinking and responsibility throughout the research process. The work is logically structured, methodologically sound, and thoroughly referenced. It combines statistical analysis, policy review, and strategic evaluation, and identifies ways to improve economic performance in order to improve the quality of pharmaceutical care provided to the population.

General conclusion and recommendations on admission to defend. In general, the qualification work of Rida ZAKARIA on the topic: «Analysis of economic indicators of trade and financial activities of pharmacy establishments» is performed at the proper level, meets the requirements of the "Regulations on the preparation and protection of qualification works at the National University of Pharmacy" and can be recommended for defense in the Examination commission.

Scientific supervisor _____ Lyubov TERESHCHENKO

«11» of May 2026

REVIEW

for qualification work of the master's level of higher education, specialty
226 Pharmacy, industrial pharmacy

Rida ZAKARIA

on the topic: «Analysis of economic indicators of trade and financial activities of
pharmacy establishments »

Relevance of the topic. In the rapidly growing pharmaceutical industry, financial analysis plays a key role in optimizing processes and making decisions. It enables companies to make data-driven decisions in various areas of their operations, significantly increasing efficiency and competitiveness in the market. The need to evaluate the results of a pharmacy's activities is determined by its important role in the prosperity of the company and in the balanced provision of the interests of its owners, employees, and the state.

The qualification work is a theoretical generalization and solution to the scientific problem that underlies the definition of the term "financial resources" in terms of their composition, structure and value and the determination of the impact of each of the components on the financial stability, profitability, liquidity and business activity of the business entity, which will allow management personnel to make motivated decisions when developing a financial resources management system.

Author's suggestions on the research topic. The qualification work concludes that the use of economic indicators of pharmacy activity is critically important for determining the financial position of the enterprise, taking into account the impact of both the internal and external market environment on its financial condition and performance.

Practical value of conclusions, recommendations and their validity. The practical significance of the work lies in the possibility of using the obtained results in the development of effective directions for increasing the level of efficiency of pharmacy establishments in the conditions of the personal period. Thus, the research direction of Rida Zakaria work is relevant and has practical significance.

Disadvantages of work. Some minor stylistic inconsistencies and occasional language issues are present, but they do not significantly affect the overall quality or comprehension of the research.

General conclusion and assessment of the work. According to the relevance and the results of the research qualification work of Rida Zakaria on the topic: «Analysis of economic indicators of trade and financial activities of pharmacy establishments» meets the requirements for master's works and can be recommended for official defense in the Examination commission.

Reviewer

_____ Irina BONDAREVA

«12» of May 2026

ВИТЯГ

з протоколу засідання кафедри соціальної фармації

№ 15 від «13» травня 2026 року

ПРИСУТНІ: зав. каф. доц. Волкова А.В., доц. Болдарь Г.Є., доц. Дядюн Т.В., проф. Котвіцька А.А., проф. Назаркіна В.М., доц. Ноздріна А.А., проф. Панфілова Г.Л., доц. Сурікова І.О., доц. Терещенко Л.В.

ПОРЯДОК ДЕННИЙ: Про представлення до захисту в Екзаменаційній комісії кваліфікаційних робіт.

СЛУХАЛИ: завідувачку кафедри доц. Волкову А. В. з рекомендацією представити до захисту в Екзаменаційній комісії кваліфікаційну роботу здобувача вищої освіти спеціальності 226 Фармація, промислова фармація Ріда Закарія на тему: «Аналіз економічних показників торговельно-фінансової діяльності аптечних закладів».

Науковий керівник: к. фарм. н., доцент кафедри СФ Терещенко Л.В.

Рецензент: к. фарм. н., доцент кафедри ММЗЯФ Бондарева І.В.

ВИСТУПИЛИ: доц. Волкова А.В., проф. Назаркіна В.М., доц. Сурікова І.О. висловили рекомендації до кваліфікаційної роботи Ріда Закарія

УХВАЛИЛИ: Рекомендувати до захисту в Екзаменаційній комісії кваліфікаційну роботу здобувача вищої освіти Ріда Закарія на тему: «Аналіз економічних показників торговельно-фінансової діяльності аптечних закладів».

Завідувачка каф. СФ, доцент _____

Аліна ВОЛКОВА

Секретар, доцент _____

Альміра НОЗДРІНА

НАЦІОНАЛЬНИЙ ФАРМАЦЕВТИЧНИЙ УНІВЕРСИТЕТ

**ПОДАННЯ
ГОЛОВІ ЕКЗАМЕНАЦІЙНОЇ КОМІСІЇ
ЩОДО ЗАХИСТУ КВАЛІФІКАЦІЙНОЇ РОБОТИ**

Направляється здобувачка вищої освіти Ріда Закарія до захисту кваліфікаційної роботи за галуззю знань 22 Охорона здоров'я спеціальністю 226 Фармація, промислова фармація освітньо-професійною програмою Фармація на тему: «Analysis of economic indicators of trade and financial activities of pharmacy establishments».

Кваліфікаційна робота і рецензія додаються.

Декан факультету _____ / Олександр Гончаров /

Висновок керівника кваліфікаційної роботи

Здобувачка вищої освіти Ріда Закарія під час виконання кваліфікаційної роботи продемонструвала уміння працювати з науковими даними, проводити їх узагальнення, аналізувати та узагальнювати результати дослідження. Усі поставлені завдання відповідно до мети роботи було виконано у повному обсязі. Результати дослідження належним чином оброблені і представлені.

Керівник кваліфікаційної роботи _____ Любов ТЕРЕЩЕНКО

«11» травня 2026 р.

Висновок кафедри про кваліфікаційну роботу

Кваліфікаційну роботу розглянуто. Здобувачка вищої освіти Ріда Закарія допускається до захисту даної кваліфікаційної роботи в Експертній комісії.

Завідувачка кафедри
соціальної фармації _____ Аліна ВОЛКОВА

«13» травня 2026 р.

Qualification work was defended

of Examination commission on

« 09 » __ June __ 2026 year

With the grade _____

Head of the State Examination commission,

DPharmSc, Professor

_____ / Volodymyr YAKOVENKO /