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# Pharmaceutical Marketing in Algeria: Navigating the Tension between Commercial Imperatives and Public Health Regulation — Regulatory Constraints, Stakeholder Dynamics and Emerging Digital Challenges

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**Abstract:** This study examines how Algeria's regulatory framework shapes pharmaceutical marketing practices and their alignment with public health objectives. Using an analytical approach based on literature, official documents, and Algerian pharmaceutical regulations, it shows that companies operate within a highly regulated environment covering product registration, promotion, distribution, pricing, and reimbursement. The prohibition of direct advertising to the public encourages companies to communicate mainly with healthcare professionals through scientific and ethical channels. The study also highlights the role of pricing and reimbursement policies in supporting generic medicines and price-based competition, as well as the opportunities and regulatory challenges created by digitalisation. It concludes that pharmaceutical marketing in Algeria should balance commercial objectives with regulatory compliance, ethical responsibility, and public health protection.

**Keywords:** Pharmaceutical marketing; Algeria; pharmaceutical regulation; public health; digital marketing.

## 1. Introduction

Pharmaceutical marketing concerns products that directly affect human health. Pharmaceutical companies seek to promote their products, strengthen their market position, and achieve commercial growth. At the same time, their activities may be subject to regulatory requirements related to patient safety, the appropriate use of medicines, and the accuracy of promotional information. This raises the question of how commercial objectives and public health objectives interact in the pharmaceutical sector.

In Algeria, pharmaceutical companies operate within a regulatory framework that may influence their marketing practices, including product promotion, relationships with healthcare professionals, market access, and the use of digital communication channels. The sector has also witnessed developments related to local manufacturing and the increasing use of digital

BULLETIN OF
CZECH ECONOMETRIC SOCIETY
www.bulletin-ces.cz
ISSN 1212-074X | VOLUME 33 | ISSUE 1 | 2026

tools in health communication. These developments raise questions about the extent to which marketing practices are consistent with public health objectives.

- **Research Problem and Questions**

This article examines how Algeria's pharmaceutical regulatory framework shapes companies' marketing practices, and how these practices may be aligned with public health objectives. It focuses on the relationship between regulatory requirements, companies' commercial strategies, stakeholder relationships, and digital marketing practices. In light of these considerations, the main research question of this article is: **How does Algeria's pharmaceutical regulatory framework shape companies' marketing practices, and how can these practices be aligned with public health objectives?**

To address this question, the study considers the following sub-questions:

- What are the main regulatory constraints governing pharmaceutical marketing in Algeria?
- How do relationships between pharmaceutical companies, healthcare professionals, regulatory authorities, and patients influence pharmaceutical marketing practices?
- What challenges does the growing use of digital marketing channels pose for pharmaceutical regulation and public health protection?

- **Research Objectives:** This article aims to analyse the main regulatory constraints governing pharmaceutical marketing in Algeria, examine the influence of relationships between pharmaceutical companies, healthcare professionals, regulatory authorities, and patients on marketing practices, identify the challenges posed by the growing use of digital marketing channels for pharmaceutical regulation and public health protection, and explore how pharmaceutical marketing practices can be aligned with public health objectives.
- **Research Methodology:** The article adopts an analytical approach based on a review of relevant academic literature, official documents, and Algerian pharmaceutical regulations. It also draws on available empirical data to examine actual marketing practices and the challenges faced by key stakeholders. This approach provides a basis for assessing the relationship between commercial objectives and public health requirements in Algeria.

## 2. Theoretical Foundations of Pharmaceutical Marketing.

Pharmaceutical marketing has evolved considerably in response to major transformations within the pharmaceutical industry, particularly the growing number of companies operating in the sector and the increasing intensity of competition. These developments have strengthened the role of marketing as a strategic function and expanded the range of practices adopted by pharmaceutical companies to maintain their market positions (Slatter, 2015, pp. 1–20).

As competition has intensified, pharmaceutical marketing has become increasingly important for companies seeking to enter new markets, attract customers, and strengthen their competitive positions. However, influencing consumers and prescribers has become more challenging as both groups have developed greater awareness and understanding of pharmaceutical products and their importance. Consequently, companies have been encouraged to adopt innovative marketing approaches that differentiate their products and help them achieve a competitive advantage (Kolassa et al, 2002, pp. 17–70). In this context, adopting a marketing orientation is no longer simply an option but a strategic necessity. It enables pharmaceutical companies to respond to changing market conditions, adapt their strategies to industry developments, and sustain their competitiveness (Slatter, 2015, pp. 21–45).

BULLETIN OF
CZECH ECONOMETRIC SOCIETY
www.bulletin-ces.cz
ISSN 1212-074X | VOLUME 33 | ISSUE 1 | 2026

Beyond its commercial dimension, pharmaceutical marketing also has a broader responsibility towards patients and public health. Its purpose is not limited to promoting products or serving the interests of individual organisations ; it should also contribute to the provision of quality healthcare and the protection of the public interest. This requires all stakeholders involved in the pharmaceutical marketing chain to fulfil their respective roles effectively, with the patient and public health remaining at the centre of their activities (Kolassa et al, 2002, pp. 17–70).

Furthermore, the development of pharmaceutical marketing has contributed to increasing public awareness of healthcare issues. Through health programmes, medical publications, and public health awareness campaigns, consumers have gained greater access to information about medicines and developments in healthcare. As a result, they have become more informed and attentive to pharmaceutical products and related health matters (Gurău, 2005, pp. 421–428).

**2.1. The Buying Mechanism in the Pharmaceutical Marketing Environment**

The pharmaceutical buying process differs from conventional consumer purchasing due to the involvement of multiple stakeholders whose interactions influence treatment selection, provision, financing, and use (Kolassa et al, 2002, pp. 17–70). Although patients are the ultimate beneficiaries of medicines, they do not necessarily make purchasing decisions independently. Consequently, pharmaceutical marketing must consider patients' therapeutic needs and the institutional and professional context in which treatment decisions are made (Kolassa et al., 2002).

Corstjens (1991) identifies four main parties involved in pharmaceutical purchasing: prescribers, who determine the appropriate treatment; influencers, such as healthcare institutions, nurses, and academics, who shape professional and consumer decisions; direct consumers, represented by patients; and funders, including patients, governments, and third-party organisations such as hospitals and insurance companies. This classification highlights the separation between the parties who prescribe, influence, use, and finance medicines.

Thus, pharmaceutical purchasing involves interconnected flows of medicines, information, and payments rather than a direct transaction between a company and an individual consumer. Its analysis must also account for patients' physiological, psychological, and social characteristics, which influence their therapeutic needs and patterns of treatment use.

**2.2. Distribution of Roles among Professional and Institutional Actors**

Physicians play a central role in the pharmaceutical purchasing process by assessing patients' therapeutic needs, evaluating available medicines, and selecting the most appropriate treatment (Kolassa et al., 2002, pp. 17–70). Their prescribing decisions highlight the importance of providing reliable scientific information on medicines' characteristics, uses, and risks, ensuring that professional communication supports therapeutic decisions rather than merely pursuing commercial influence.

Pharmacists, in both community and hospital settings, contribute to patient access to treatment through medicine dispensing, counselling, and monitoring their use. According to WHO and the International Pharmaceutical Federation (WHO et IPF, 2011), their responsibilities include supplying quality-assured medicines, providing appropriate information, and supporting patient safety through cooperation with other healthcare

BULLETIN OF
CZECH ECONOMETRIC SOCIETY
www.bulletin-ces.cz
ISSN 1212-074X | VOLUME 33 | ISSUE 1 | 2026

professionals. Thus, pharmacies represent more than points of sale; they are essential links in the healthcare network, facilitating access to medicines and coordination among stakeholders.

Pharmaceutical manufacturers and distributors are responsible for medicine production, availability, and distribution through supply channels. The WHO (2010) defines distribution as encompassing procurement, storage, transport, sale, and supply, emphasising the responsibility of all supply-chain participants for maintaining product quality and distribution integrity. Accordingly, medicine quality alone is insufficient unless products are available at the right place and time. Improving access also requires rational selection, affordable prices, reliable supply systems, and sustainable financing (WHO, 2015).

Finally, governments, insurance companies, and other financing bodies influence purchasing decisions by covering treatment costs, either fully or partially, while patients may also pay directly. Consequently, the person using or benefiting from a medicine is not necessarily the one who selects or pays for it. Pharmaceutical demand therefore depends not only on patient preferences but also on reimbursement arrangements, insurance coverage, and the relationships between prescribers, users, and payers. Sustainable financing, supported by adequate human resources, information systems, and institutional coordination, 2024remains essential to ensuring access to essential medicines (WHO, 2015).

## 3. The Regulatory Architecture of Pharmaceutical Marketing in Algeria

Pharmaceutical marketing in Algeria is shaped by a regulatory framework and an external environment that determine both the activities undertaken by pharmaceutical companies and the constraints governing them. In this context, this section examines the evolution of the legislation and regulations governing Algeria's pharmaceutical sector, as well as the principal external environmental factors influencing the activities and marketing strategies of pharmaceutical companies.

### 3.1. Evolution of the Pharmaceutical Regulatory Framework in Algeria

The pharmaceutical sector in Algeria has undergone a gradual evolution in its legal and regulatory framework, aimed at regulating its activities and strengthening oversight of pharmaceutical products to ensure their quality and safety and protect public health. This evolution has passed through two main phases, which will be discussed below.

- **The Period of State Dominance over the Sector (1963–1990)**

During the period from 1963 to 1990, the Algerian pharmaceutical industry was characterised by the near-total dominance of the public sector. Established in 1963, the Central Pharmacy of Algeria (PCA) monopolised pharmaceutical-related activities after acquiring the warehouses and pharmacies inherited from the colonial period, in the absence of a national pharmaceutical industry (Frogerais, 2019).

In 1969, the PCA was granted a monopoly over the importation, manufacture, and marketing of medicines, as a prelude to developing domestic production capacity. Its responsibilities included ensuring the country's supply of medical products, organising the distribution of medicines to health institutions and public pharmacies, preparing import and production programmes to guarantee continuity of supply, providing essential medicines, and supporting free treatment (Saiti, 2010, p. 216). It also sought to gradually develop a national pharmaceutical industry within the framework of the National Medicines Code.

BULLETIN OF
CZECH ECONOMETRIC SOCIETY
www.bulletin-ces.cz
ISSN 1212-074X | VOLUME 33 | ISSUE 1 | 2026

In terms of production, pharmaceutical activity after independence was limited to the Pharmal and Biotic laboratories, inherited from the colonial period, before the Central Pharmacy began acquiring their assets and establishing new production units. Despite these new investments, the industrial base remained limited, making the country heavily dependent on imports to meet its medicine needs. In 1982, an important regulatory change took place, marked by the restructuring of the Central Pharmacy in order to simplify management, strengthen decentralisation in storage and distribution, and separate production from marketing activities (Haddadou, 2026, p. 869).

- **The Period of Gradual Liberalization of the Sector (from 1990 onwards)**

The early 1990s marked a turning point in the development of Algeria's pharmaceutical industry, as the sector gradually moved away from the predominance of public enterprises towards greater openness to domestic and foreign private investment. This transition occurred within the broader context of economic reforms, the transition towards a market economy, and the liberalization of foreign trade. In this regard, Law No. 90-10 of 14 April 1990 on Money and Credit constituted a major legislative reform accompanying this transformation (Law No. 90-10, 1990). Although it did not directly regulate the pharmaceutical industry, it established a broader financial and banking framework that indirectly favoured private investment by redefining the institutional organization of the banking system and creating more favourable conditions for the financing of economic activities, including industrial and pharmaceutical operations.

This gradual opening of the market was reflected in changes to the structure of the pharmaceutical sector, particularly through the growing number of private enterprises operating in the market and the expanding role of private stakeholders. These developments contributed to reshaping the landscape of market participants and reducing the public sector's monopoly over various pharmaceutical activities (Haddadou, 2026, p. 870).

Regarding its current institutional structure, the public sector continues to occupy a significant position. It is led by the Saidal Group, a major public pharmaceutical manufacturer, alongside the Pharmacie Centrale des Hôpitaux (PCH), which is responsible for the procurement, storage, distribution, and supply of medicines to public healthcare institutions. The National Agency for Pharmaceutical Products (ANPP) is responsible for the registration, marketing authorization, quality control, and regulatory oversight of pharmaceutical products. Meanwhile, the National Social Insurance Fund for Salaried Workers (CNAS) contributes to the financing of healthcare coverage and the reimbursement of medicines in accordance with the applicable regulations.

The domestic private sector, by contrast, comprises a range of companies involved in pharmaceutical manufacturing and distribution, several of which are members of the National Union of Pharmaceutical Operators (Union Nationale des Opérateurs de la Pharmacie – UNOP). Major companies in this segment include Biopharm, Merinal, Frater-Razes, LDM Santé, HUPP, BeKer Laboratoires, Biotic, and SOPHAL. Multinational pharmaceutical companies are also present in the Algerian market through local subsidiaries or licensing and manufacturing agreements. These include Sanofi, Pfizer, Roche, GlaxoSmithKline (GSK), and Hikma. This diversity reflects the multiplicity of stakeholders in the Algerian pharmaceutical market and the overlapping roles of public and private, domestic and foreign enterprises within

BULLETIN OF
CZECH ECONOMETRIC SOCIETY
www.bulletin-ces.cz
ISSN 1212-074X | VOLUME 33 | ISSUE 1 | 2026

a competitive environment that remains subject to a specific regulatory and supervisory framework.

### 3.2. External Environmental Analysis of Pharmaceutical Marketing in Algeria

The continued existence and sustainability of Algerian pharmaceutical companies depend on the external environment in which they operate, an environment characterized by both breadth and complexity. These characteristics have significant implications for pharmaceutical companies' activities, marketing strategies, and ability to adapt to market developments.

- **Technological Environment:** The pharmaceutical industry is classified as both technology- and capital-intensive, given the substantial investments it requires in research and development, clinical trials, and the use of advanced technologies in drug manufacturing and quality and safety assurance. It also requires specialized financial and human resources, in addition to compliance with stringent regulatory and supervisory standards (Scherer, 2000; Schweitzer & Lu, 2018). In this context, pharmaceutical companies operating in Algeria are seeking to keep pace with technological developments by strengthening their production capabilities, upgrading information systems and industrial technologies, and developing the skills and competencies of their workforce. Particular attention is also given to research and development, which represents a key pillar for supporting pharmaceutical innovation and improving industrial performance through the development of generic medicines and the enhancement of product characteristics and manufacturing processes. Biopharm Group provides an example of this approach. In 2024, its consolidated capital expenditure amounted to DZD 2.606 billion, supporting its growth through increased production capacity and the expansion of its logistics infrastructure (Biopharm, 2025a). During the same year, the Group implemented projects related to the development of information systems and operational and industrial technologies. It also recorded 16,734 training hours, benefiting 769 employees. These figures reflect the Group's commitment to investing simultaneously in equipment and technological systems, on the one hand, and human capital development, on the other (Biopharm, 2025b, pp. 29, 32). This approach also extends to strengthening cooperation between pharmaceutical companies and scientific research institutions. In December 2024, cooperation agreements were announced involving the National Agency for Pharmaceutical Products (ANPP), the Saidal Group, and several academic and research institutions, including the Biotechnology Research Centre and the Research Centre in Pharmaceutical Sciences. These agreements aim to promote scientific research and develop qualified human resources in specific fields.

These initiatives highlight the importance of integrating industrial investment, human resource development, and cooperation with research institutions in supporting the technological modernization of Algeria's pharmaceutical industry. Nevertheless, despite the efforts made in research and development, challenges remain regarding access to innovative medicines, particularly because of their high costs, limited affordability, and the need to control pharmaceutical expenditure. In this regard, the inclusion of innovative medicines on the list of medicines approved by the Central Pharmacy of Hospitals (PCH) is regarded as a key mechanism for improving access to these treatments (Dahmani et al., 2023).

- **The Economic Environment:** The Algerian pharmaceutical industry has undergone gradual structural transformations, shaped by changes in economic policies and the reorganisation of the market, as previously discussed. The establishment of the Saidal Group marked an

BULLETIN OF
CZECH ECONOMETRIC SOCIETY
www.bulletin-ces.cz
ISSN 1212-074X | VOLUME 33 | ISSUE 1 | 2026

important milestone in the development of the national pharmaceutical industry, as it played a key role in strengthening domestic production. Subsequently, economic reforms and legislative amendments contributed to expanding private-sector participation, gradually shifting the industry from a model largely dominated by public enterprises towards a more open market in which public and private companies coexist, alongside the growing role of domestic pharmaceutical manufacturing. These transformations have contributed to reshaping the economic structure of Algeria's pharmaceutical industry and defining the main features of its development.

- **The Political Environment:** Government policies and the state's overall strategic orientations have a direct influence on the development of the pharmaceutical industry in Algeria, given the sector's close connection to health security and the provision of medicines to the population. The government's commitment to this sector is reflected, among other things, in the financial resources allocated to healthcare. Under the 2026 Draft Finance Law, payment appropriations allocated to the health sector amounted to approximately DZD 1,048.17 billion, while commitment authorizations were estimated at DZD 1,038.57 billion. These appropriations are intended to finance healthcare institutions, procure medicines, vaccines and medical equipment, construct and rehabilitate healthcare facilities, and strengthen training capacities within the sector (Ministry of Finance, Algeria, 2026, Article 4). In addition, the state has adopted policy orientations aimed at encouraging the production and use of generic medicines and supporting domestic pharmaceutical production. These orientations highlight the role of public policy in shaping the development of the pharmaceutical market and determining the conditions under which competition takes place. They also have implications for pharmaceutical companies' marketing decisions, particularly those relating to product portfolios, pricing, distribution, and competitive positioning in the domestic market.
- **The Social Environment :**The social environment is one of the key factors influencing the pharmaceutical industry. Social habits and beliefs regarding illness and treatment, levels of health awareness and literacy, as well as prevailing socioeconomic conditions, all contribute to shaping demand for medicines and healthcare services and influence patterns of access to and use of these products and services (Kolassa et al, 2002). In Algeria, the importance of this dimension is particularly evident in the health challenges facing the population and the extent to which individuals benefit from healthcare services. In this regard, the National Survey on Noncommunicable Disease Risk Factors (STEPS), conducted between 2016 and 2017 among 6,989 individuals aged 18–69, found that 23.6% of participants either had hypertension or were taking medication to treat it. The survey also revealed that 71.9% of individuals whose blood pressure measurements indicated hypertension were not taking medication to manage the condition at the time of the survey. Although these findings alone do not establish the reasons for the lack of treatment, whether related to health awareness, diagnosis, or access to healthcare services, they highlight the importance of social and behavioural factors in understanding healthcare-seeking patterns and the use of health services (World Health Organization, 2000).
With regard to the rational use of medicines, Algeria's National Strategic Plan to Combat Antimicrobial Resistance 2024–2028 identifies raising public awareness and promoting behavioural change in antibiotic use, alongside strengthening controls on the dispensing of antibiotics without a prescription, as key intervention priorities. These measures aim to reduce

BULLETIN OF
CZECH ECONOMETRIC SOCIETY
www.bulletin-ces.cz
ISSN 1212-074X | VOLUME 33 | ISSUE 1 | 2026

inappropriate practices in the consumption of such medicines (Plan national stratégique de lutte contre la résistance aux antimicrobiens 2024–2028, n.d.).

Accordingly, taking the social environment into account when developing pharmaceutical marketing strategies requires companies to adapt their communication and awareness-raising activities to differences in health literacy and awareness among population groups. It also involves contributing to initiatives that promote the rational use of medicines and strengthening cooperation with healthcare professionals, who play an influential role in treatment decisions and the use of pharmaceutical products. Furthermore, pharmaceutical companies should consider disparities in access to healthcare services when defining their marketing strategies. Such an approach can help pharmaceutical companies operating in Algeria reconcile their economic objectives with their broader responsibilities towards public health.

- **The Legal Environment :** The pharmaceutical industry in Algeria operates within a legal and regulatory framework governing the various activities related to pharmaceutical products. The Ministry of Health, Population and Hospital Reform (MSPRH) is the regulatory authority responsible for medicines, biological products, and medical devices intended for human use in Algeria. Within the Ministry, the Directorate General of Pharmacy and Health Equipment (DGPES) is responsible for the examination, assessment, regulation, and monitoring of pharmaceutical products, following the implementation of the Ministry's new organizational structure in 2012. On 2 July 2018, the National Agency for Pharmaceutical Products (ANPP) was established as an institution with financial autonomy, with the mandate of regulating medicines and other medical products. This legal and regulatory framework requires pharmaceutical companies to comply with the various applicable legal and regulatory provisions throughout all stages of their operations. These requirements are intended to ensure the quality, safety, and efficacy of medicines, while also safeguarding public health (People's Democratic Republic of Algeria, 2018, 2019, 2020). The legislation governing Algeria's pharmaceutical industry will be examined in greater detail in the following sections.

## 3. How Regulation Reshapes the Pharmaceutical Marketing Mix: Marketing Freedom vs. Regulatory Compliance)

The specific nature of pharmaceutical products in Algeria and their direct implications for public health have imposed restrictions and regulatory requirements on pharmaceutical companies, limiting their freedom to make marketing mix decisions and subjecting their practices to regulatory requirements that extend beyond conventional market considerations. Accordingly, this section examines how the regulatory framework in force in Algeria influences the different elements of the marketing mix, while highlighting the balance pharmaceutical companies seek to achieve between their commercial objectives and compliance with regulatory requirements.

### 3.1. Pharmaceutical product

The pharmaceutical product is a key component of the marketing mix and encompasses both originator and generic medicines. In Algeria, the marketing of pharmaceutical products is subject to regulatory requirements, including the assessment of their quality, safety and efficacy prior to obtaining marketing authorisation (MA). In this regard, the National Agency for Pharmaceutical Products (ANPP) is responsible for examining the technical and scientific documentation submitted in support of marketing authorisation applications. This

BULLETIN OF
CZECH ECONOMETRIC SOCIETY
www.bulletin-ces.cz
ISSN 1212-074X | VOLUME 33 | ISSUE 1 | 2026

documentation includes information on the active substance, composition, pharmaceutical form and manufacturing process, as well as the results of relevant clinical and analytical studies supporting the product's quality, safety and efficacy. Following the assessment process, marketing authorisation is granted to products that meet the applicable regulatory requirements, whether originator or generic medicines.

Regulatory requirements also extend to the establishment and operation of pharmaceutical establishments. Under Article 17 of Executive Decree No. 21-82, the establishment and opening of pharmaceutical establishments are subject to prior authorisations issued by the Minister responsible for the pharmaceutical industry. These constitute two separate stages: authorisation to establish the pharmaceutical establishment and authorisation to open it (People's Democratic Republic of Algeria, 2021, Article 17).

**Promoting the Generic Medicines Industry**

Generic pharmaceutical companies play an important role in improving access to treatment by providing alternatives to originator medicines at more competitive prices once the patent protection period has expired or the associated exclusivity rights have ceased. This segment has experienced considerable expansion at the international level, owing to its contribution to strengthening competition in pharmaceutical markets and reducing treatment costs, thereby enabling wider segments of the population to access medicines. Although the revenues of generic pharmaceutical companies may be lower than those of major pharmaceutical companies, their economic and public health significance lies in their contribution to reducing medicine prices and expanding access to healthcare (Henry et Lexchin, 2002).

In Algeria, promoting generic medicine production forms part of broader policy orientations aimed at developing the national pharmaceutical industry and strengthening its production capacity. In this context, public authorities have sought to encourage private investment and expand domestic manufacturing, with the objectives of reducing reliance on imports, lowering the pharmaceutical import bill, and limiting dependence on external markets (Alsamara et al., 2022).

Within this framework, the Ministry of Pharmaceutical Industry, under the mandates defined by Executive Decree No. 20-271 of 29 September 2020, prior to its repeal, played a role in directing industrial policy in the pharmaceutical sector and monitoring its implementation. These responsibilities included formulating pharmaceutical industrial policy, assessing its impact, and proposing the necessary adjustments in coordination with the relevant authorities. They also encompassed strengthening the production capacities of pharmaceutical companies, developing production inputs, encouraging innovation and technological advancement, and improving the investment climate, with a view to supporting industrial integration and developing the domestic production base (Executive Decree No. 20-271 of 2020, Article 3).

The Ministry's policy orientations also included directing investment projects towards the production of essential medicines with high added value, facilitating the establishment of pharmaceutical establishments, and promoting partnerships between the public and private sectors through the development, monitoring and evaluation of cooperation programmes. Regarding market supply, its responsibilities included contributing to the formulation of policies governing the registration and approval of pharmaceutical products, monitoring their quality, efficacy and safety, and supporting their availability on the market through regulatory

BULLETIN OF
CZECH ECONOMETRIC SOCIETY
www.bulletin-ces.cz
ISSN 1212-074X | VOLUME 33 | ISSUE 1 | 2026

and monitoring mechanisms. These mechanisms also covered the regulation of imports of unregistered products through temporary authorisations. Taken together, these measures reflected an approach aimed at achieving complementarity between domestic production and imports in order to meet the needs of the national pharmaceutical market (Executive Decree No. 20-271 of 2020, Article 4).

**3.2. Pharmaceutical distribution**

The World Health Organization defines pharmaceutical distribution as encompassing a range of activities, including the purchasing, procurement, holding, storage, sale, supply, import, export and movement of medical products, excluding the direct dispensing of medicines to patients or their representatives (World Health Organization, 2020). In this sense, distribution extends beyond the physical transportation of medicines to encompass an integrated set of logistical and regulatory activities aimed at ensuring the availability of pharmaceutical products and their movement through the various stages of the supply chain.

Storage and transportation are particularly important components of this chain, given their role in maintaining the quality, safety and efficacy of pharmaceutical products throughout their handling and until they reach the intended recipients. In this regard, the World Health Organization emphasises the need for adequate storage facilities and appropriate transportation systems to protect products against deterioration and contamination, while ensuring compliance with the required storage conditions and environmental requirements, particularly for products sensitive to variations in temperature and humidity. Furthermore, quality assurance depends on compliance with Good Manufacturing Practices (GMP), Good Storage Practices (GSP) and Good Distribution Practices (GDP), which constitute essential standards for controlling product handling conditions and maintaining product quality throughout the different stages of the supply chain (World Health Organization, 2020).

- **The Structure of the Pharmaceutical Distribution Channel in Algeria**

In Algeria, the wholesale distribution of medicines and medical devices is governed by a legal and regulatory framework that defines the conditions under which this activity may be conducted and the types of establishments authorised to engage in it. In this regard, Executive Decree No. 21-82 of 23 February 2021 regulates pharmaceutical establishments and establishes the conditions for setting up wholesale distribution establishments and conducting their activities. These establishments are primarily responsible for purchasing, storing and transporting pharmaceutical products for distribution to pharmacies and public and private healthcare institutions. Their activities are also subject to the relevant legal authorisations (Executive Decree No. 21-82, 2021; Law No. 18-11, 2018).

In the private sector, the pharmaceutical distribution channel follows a pathway linking pharmaceutical manufacturers and importers to wholesale distributors, who subsequently supply products to pharmacies across the country. Wholesale distributors facilitate the delivery of medicines to final distribution outlets by performing a range of logistical functions, including inventory management, transportation coordination and the expansion of geographical market coverage. In doing so, they help reduce the operational and logistical burden on manufacturing and importing companies (AIAD et al., 2020).

In the public sector, the supply and distribution of medicines are carried out primarily through the Central Pharmacy of Hospitals (Pharmacie Centrale des Hôpitaux – PCH), which

BULLETIN OF
CZECH ECONOMETRIC SOCIETY
www.bulletin-ces.cz
ISSN 1212-074X | VOLUME 33 | ISSUE 1 | 2026

is responsible for supplying medicines and medical products to public hospitals and healthcare institutions (Dahmani et al., 2023). This institution plays a central role in ensuring the availability of pharmaceutical products within the public hospital sector. However, its operational effectiveness depends on several factors, including the level of public funding, the efficiency of procurement procedures, the accuracy of needs assessment and the quality of coordination with healthcare institutions. Any shortage or delay in supply may disrupt the continuity of healthcare services and compel some patients to obtain their medicines from private pharmacies, potentially imposing additional financial burdens on them.

- **Distribution Margins in Algeria**

Distribution margins represent an important economic and regulatory dimension of the pharmaceutical distribution system in Algeria. The margins applicable to wholesalers and pharmacists are regulated by the public authorities with the aim of controlling the commercial component of the final price of medicines and limiting unjustified price increases, thereby helping to protect patients' purchasing power and improve their access to treatment. These margins also contribute to covering the costs associated with distribution activities, particularly storage, transportation, inventory management and related logistical services (Dahmani et al., 2023). In this regard, Executive Decree No. 98-44 of 1 February 1998, concerning the maximum margins applicable to the production, packaging and distribution of medicines for human use, establishes maximum degressive rates for wholesale and retail distribution according to specified price brackets. Specifically, the wholesale and retail margins are set at 20% and 50%, respectively, for medicines priced at up to DZD 70. These rates progressively decrease to 15% and 33% for medicines priced between DZD 70.01 and DZD 110, to 12% and 25% for those priced between DZD 110.01 and DZD 150, and finally to 10% and 20% for medicines priced above DZD 150. This system reflects a degressive margin structure, whereby the applicable margin percentage decreases as the price of the medicine increases, thereby limiting the relative increase in prices attributable to intermediaries along the distribution channel. The decree also specifies the basis on which these margins are calculated: the wholesale distribution margin is based on the production or packaging price for domestically manufactured or packaged medicines, or on the Cost, Insurance and Freight (CIF) price for imported medicines, whereas the retail distribution margin is calculated on the wholesale selling price (Executive Decree No. 98-44, 1998, Articles 4–5).

- **Structural and Logistical Challenges Facing the Pharmaceutical Distribution System in Algeria**

The pharmaceutical distribution system in Algeria faces several structural and logistical challenges, particularly recurrent medicine shortages and geographical disparities in access to pharmaceutical products. Medicine shortages result from disruptions across different stages of the supply chain, including imbalances between supply and demand, insufficient financial resources, difficulties related to production and imports, poor coordination among stakeholders, inaccurate demand forecasting, and weaknesses in inventory management (Belaidi & Chibani, 2019). A study of the pharmaceutical supply system in Algerian public hospitals similarly found that shortages were mainly associated with insufficient funding, inadequate needs forecasting, and ineffective management of required quantities. Although reforms introduced to the supply

BULLETIN OF
CZECH ECONOMETRIC SOCIETY
www.bulletin-ces.cz
ISSN 1212-074X | VOLUME 33 | ISSUE 1 | 2026

system had contributed to a partial improvement in medicine availability, several shortcomings persisted (Maougal, 2015). These disruptions may delay access to treatment, require the use of alternative therapeutic options, and impose additional financial burdens on patients.

Geographical disparities constitute another major challenge, given Algeria's vast territory and regional differences in population density, infrastructure, transport networks, and the distribution of healthcare facilities. While urban areas generally benefit from greater proximity to distribution centres and better logistical infrastructure, rural and remote areas may experience greater difficulties in securing regular access to medicines. In this regard, data from the 2019 Multiple Indicator Cluster Survey (MICS), as reported in UNICEF's Country Programme Document for Algeria, indicate social and geographical disparities in access to certain healthcare services (UNICEF, 2023). These disparities highlight the need to consider geographical and social factors when assessing the effectiveness of pharmaceutical distribution and access to treatment.

### 3.3. Pharmaceutical Promotion

In 1988, the World Health Organization (WHO) issued the Ethical Criteria for Pharmaceutical Promotion to encourage the rational use of medicines and improve healthcare quality. These criteria provide general ethical guidelines for pharmaceutical promotional practices, adaptable to countries' economic, social, cultural, legislative, and healthcare contexts. Although not legally binding, they serve as an important reference for developing national regulations, strengthening self-regulation, and monitoring promotional activities in line with ethical principles and public health requirements (World Health Organization, 1988).

- **Legislative Developments of pharmaceutical Promotion in Algeria**

The regulation of pharmaceutical promotion in Algeria has evolved gradually, moving from the introduction of initial rules governing the provision of medical and scientific information on pharmaceutical products towards the establishment of a more comprehensive legal framework aimed at regulating promotional practices and strengthening oversight. This evolution reflects the legislator's intention to strike a balance between the commercial interests of pharmaceutical companies and public health protection requirements by subjecting promotional activities to legal and professional standards grounded in scientific and ethical considerations.

Executive Decree No. 92-286 of 6 July 1992, concerning medical and scientific information on pharmaceutical products intended for human use, is among the key foundational texts governing this field (Executive Decree No. 92-286, 1992). It represented an initial step towards regulating promotional activities and subjecting them to scientific and professional requirements, rather than allowing them to be driven solely by commercial considerations. As the pharmaceutical sector evolved and the need to regulate the distribution and use of medicines increased, Law No. 18-11 of 2 July 2018 on Health reinforced this approach by dedicating Articles 235 to 240 to provisions governing pharmaceutical information and advertising for pharmaceutical products. These provisions emphasise that the information provided must be accurate, verifiable and consistent with available scientific knowledge. The law also distinguishes between information and advertising directed at healthcare professionals and that intended for the general public. In particular, advertising directed at healthcare professionals is subject to prior authorisation, while pharmaceutical advertising and promotion targeting the

BULLETIN OF
CZECH ECONOMETRIC SOCIETY
www.bulletin-ces.cz
ISSN 1212-074X | VOLUME 33 | ISSUE 1 | 2026

general public are prohibited, irrespective of the communication medium used (Law No. 18-11, 2018, Articles 235–240). This effectively restricts pharmaceutical companies' ability to use mass communication channels and digital platforms for direct promotion of medicines to the public whenever such practices fall within the scope of prohibited pharmaceutical advertising. These restrictions are particularly significant given the role played by physicians, pharmacists and other healthcare professionals in prescribing and dispensing medicines, as well as the potential influence of promotional information on their professional and therapeutic decisions.

In 2020, this legislative framework underwent further amendment through Ordinance No. 20-02 of 30 August 2020, amending and supplementing Law No. 18-11 on Health. The amendments included provisions relating to the regulation of advertising for pharmaceutical products. In particular, they strengthened the requirements governing the accreditation of companies specialising in medical promotion and regulated advertising for non-prescription pharmaceutical products directed at healthcare professionals by making it subject to prior technical approval by the competent authorities (Ordinance No. 20-02, 2020). These measures form part of a broader approach aimed at limiting the influence of commercial interests on decisions concerning the prescription and dispensing of medicines, while preserving the scientific and professional nature of the relationship between pharmaceutical companies and healthcare providers.

At the level of professional regulation and oversight of promotional practices, Decision No. 03 of 4 February 2026, issued by the Ministry of Pharmaceutical Industry, represents a further stage in the development of this framework. The decision establishes the conditions and procedures for accrediting companies specialising in medical promotion, as well as the requirements for obtaining prior authorisation to advertise pharmaceutical products. It also regulates the profession of medical representative. In this regard, it requires candidates to hold a university degree in a health-related or biological discipline and to obtain prior authorisation from the relevant departments of the Ministry of Pharmaceutical Industry. Furthermore, it requires the concerned companies to submit an annual declaration identifying the medical representatives employed by them (Decision No. 03, 2026). These provisions reflect the competent authorities' intention to subject companies and individuals engaged in medical promotion to more clearly defined professional and regulatory requirements, thereby clarifying their responsibilities and strengthening oversight of their activities.

Taken together, these legislative and regulatory developments highlight the Algerian legislator's efforts to distinguish between legitimate scientific communication and promotional practices that may conflict with professional ethics or public health protection requirements. Accordingly, legal restrictions are not intended to eliminate marketing activities in the pharmaceutical sector, but rather to regulate and guide them towards more responsible practices based on reliable scientific information and compliance with applicable professional and regulatory standards.

- **Regulatory Oversight and Legal Compliance**

The Algerian legal framework does not merely define the promotional practices that are permitted or prohibited; it also regulates the entities involved in these activities and establishes mechanisms for monitoring their compliance with applicable legal and regulatory requirements. Accordingly, legal compliance in pharmaceutical marketing should not be reduced to obtaining

BULLETIN OF
CZECH ECONOMETRIC SOCIETY
www.bulletin-ces.cz
ISSN 1212-074X | VOLUME 33 | ISSUE 1 | 2026

the necessary authorisations before conducting promotional activities or publishing advertising materials. Rather, it should be regarded as an ongoing responsibility shared by pharmaceutical companies, companies specialising in medical promotion, and medical representatives. This responsibility extends across all stages of promotional activities, from the preparation of promotional messages and materials to their delivery to target audiences, while ensuring their continued compliance with the applicable regulatory requirements.

- **Implications of the Legal Framework for Pharmaceutical Marketing Strategies**

The regulation of pharmaceutical promotion in Algeria has gradually evolved from basic rules governing medical and scientific information towards a more comprehensive framework aimed at controlling promotional practices and protecting public health. This development reflects the legislator's efforts to balance the commercial interests of pharmaceutical companies with scientific, ethical and professional requirements.

Executive Decree No. 92-286 of 6 July 1992 laid the foundations for regulating medical and scientific information on pharmaceutical products intended for human use, subjecting promotional activities to scientific and professional standards rather than purely commercial considerations (Executive Decree No. 92-286, 1992). This approach was further reinforced by Law No. 18-11 of 2 July 2018 on Health, particularly Articles 235–240, which require pharmaceutical information to be accurate, verifiable and consistent with available scientific knowledge. The law also distinguishes between communication directed at healthcare professionals and that intended for the general public. While advertising to healthcare professionals is subject to prior authorisation, pharmaceutical advertising targeting the general public is prohibited, regardless of the communication medium used (Law No. 18-11, 2018, Articles 235–240). These restrictions consequently limit the use of mass media and digital platforms for direct pharmaceutical promotion to consumers.

The framework was further amended by Ordinance No. 20-02 of 30 August 2020, which strengthened the regulation of medical promotion companies and introduced prior technical approval requirements for advertising non-prescription medicines to healthcare professionals (Ordinance No. 20-02, 2020). More recently, Decision No. 03 of 4 February 2026, issued by the Ministry of Pharmaceutical Industry, established additional requirements for accrediting medical promotion companies and authorising pharmaceutical advertising. It also regulated the profession of medical representative by specifying qualification requirements, prior authorisation procedures and annual reporting obligations for employing companies (Decision No. 03, 2026).

Overall, these developments demonstrate the Algerian legislator's intention to distinguish legitimate scientific communication from promotional practices that may undermine professional ethics or public health. Rather than eliminating pharmaceutical marketing, the regulatory framework seeks to guide it towards responsible practices based on reliable scientific information and compliance with professional and legal standards.

BULLETIN OF
CZECH ECONOMETRIC SOCIETY
www.bulletin-ces.cz
ISSN 1212-074X | VOLUME 33 | ISSUE 1 | 2026

### 3.4. Pharmaceutical Pricing

The pharmaceutical industry is among the most highly regulated sectors worldwide, particularly regarding drug pricing and reimbursement, which are governed by legislation established by governments in coordination with health authorities (Boschetti et al., 2006). Unlike conventional markets, pharmaceutical prices are not determined solely by supply and demand but are also shaped by health, social, and economic considerations. Accordingly, pricing involves negotiations between governments seeking to control pharmaceutical expenditure and ensure affordable access to medicines, and companies aiming to achieve satisfactory returns while maintaining incentives for investment and market participation. This balance is particularly significant in countries such as Algeria, where the government represents a major purchaser of medicines. To regulate prices, public authorities use various mechanisms, including direct price controls, regulated profit margins, reference pricing, competitive tendering, and therapeutic substitution (Henry & Lexchin, 2002, p. 1591). However, regulating pharmaceutical prices remains complex, as authorities must reconcile affordable access to treatment and public health protection with the economic viability and investment incentives of pharmaceutical companies.

- **Pharmaceutical Pricing in Algeria**

Pharmaceutical pricing in Algeria is subject to a centralized regulatory framework overseen by public authorities, covering both imported and domestically manufactured medicines. This framework aims to ensure the availability of pharmaceutical products, control reimbursement expenditure, and promote domestic production (Executive Decree No. 20-326, 2020). In this context, the aforementioned decree established the Joint Sectoral Economic Committee for Medicines, under the National Agency for Pharmaceutical Products (ANPP), as the body responsible for examining the economic dossiers of medicines, conducting international price comparisons, and determining their prices at the time of registration. It also contributes to market regulation and the control of expenditure on reimbursable medicines (Executive Decree No. 20-326, 2020, Arts. 2–3).

The Committee is responsible for determining the Free on Board (FOB) price of imported medicines and the Ex-Factory Selling Price (PCSU) of domestically manufactured medicines. These prices are determined at the initial registration stage, upon renewal every five years, or whenever a subsequent price adjustment is requested (Ministerial Order of 26 December 2020, Arts. 1–2). As for the Algerian Public Selling Price (PPA), which represents the final price paid by the consumer, it is determined by the Ministry of Trade independently of the Joint Sectoral Economic Committee for Medicines (Ministerial Order of 26 December 2020, Arts. 1–2).

The drug pricing mechanism is based on several economic and pharmaceutical criteria. These include the local integration rate, which must be at least 30% for domestically manufactured medicines, as well as comparisons with the prices of equivalent medicines in domestic and international markets. The reference countries include Morocco, Tunisia, France, Belgium, Spain, Greece, Turkey, Saudi Arabia, and Jordan, in addition to the country of origin. The assessment also takes into account expected or actual sales volumes, together with the economic and/or pharmacoeconomic studies submitted by the pharmaceutical company concerned (Ministerial Order of 26 December 2020, Arts. 3–7). With regard to generic medicines and biosimilars, the FOB price must be at least 30% lower than the reference price.

BULLETIN OF
CZECH ECONOMETRIC SOCIETY
www.bulletin-ces.cz
ISSN 1212-074X | VOLUME 33 | ISSUE 1 | 2026

This requirement is intended to encourage the use of these medicines and reduce the pharmaceutical import bill (Ministerial Order of 26 December 2020, Art. 8).

For domestically manufactured medicines, the Ex-Factory Selling Price (PCSU) is determined according to one of three alternative methods, depending on the nature of the product and the applicable criteria. These methods involve comparing the price with the average ex-tax manufacturing prices in at least four reference countries; comparing it with the FOB price of medicines initially registered for importation; or applying a weighted average of the PCSU prices of medicines registered for domestic manufacturing, taking into account the respective market share of each product (Ministerial Order of 26 December 2020, Arts. 4–6). Conversely, the FOB price of imported medicines is determined on the basis of the lowest ex-tax manufacturing price among those prevailing in the officially designated reference countries (Ministerial Order of 26 December 2020, Art. 7).

Regarding the composition of the final price, the Algerian Public Selling Price (PPA) incorporates wholesale and retail distribution margins, in addition to the pharmacist's dispensing fee. Distribution margins follow a declining scale, whereby the applicable percentages decrease as the price of the medicine increases. For medicines priced at up to DZD 70, the wholesale and retail margins are set at 20% and 50%, respectively. These margins gradually decrease to 10% and 20%, respectively, for medicines priced above DZD 150. In addition, a pharmacist's dispensing fee (SHP) is applied, amounting to DZD 2.5 for medicines classified under Lists A and B, and DZD 1.5 for those classified under List C (Ministerial Order of 26 December 2020, Arts. 9–11).

Furthermore, the regulatory framework does not limit price control to the initial registration stage; it also provides for periodic price reviews. These reviews may take place upon the five-year renewal of registration, at the request of the marketing authorisation holder, or when exchange rates fluctuate by more than 30% in comparison with the reference countries. The regulations also grant the pharmaceutical company concerned the right to appeal a pricing decision within 30 days of receiving formal notification of that decision (Ministerial Order of 26 December 2020, Arts. 20–23).

- **The Evolution of Pharmaceutical Pricing and Reimbursement Regulations in Algeria**

Within the framework of expenditure control, the Reference Reimbursement Price (TR) system was introduced in April 2006. Under this system, the National Social Security Fund for Salaried Workers (CNAS) establishes a reimbursement ceiling for medicines. The following table summarizes the main regulatory milestones and their potential implications for pharmaceutical companies' strategies.

**Regulatory Developments in the Reference Pricing System in Algeria (2005–2024)**

| Year | Regulatory Instrument | Key Regulatory Developments | Implications for Pricing and Competitive Strategies |
|---|---|---|---|
| 2005–2006 | Order of 29 December 2005 | Introduction of the reference pricing system for pharmaceutical reimbursement. | Strengthening price-based competition between originator and generic medicines. |

BULLETIN OF
CZECH ECONOMETRIC SOCIETY
www.bulletin-ces.cz
ISSN 1212-074X | VOLUME 33 | ISSUE 1 | 2026

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| 2008 | Order of 6 March 2008 | Reorganization of reimbursement mechanisms and periodic revision of reference prices. | Integration of reference prices into pharmaceutical companies' pricing decisions. |
| 2009 | Order of 28 September 2009 | Revision of the lists and inclusion of new pharmaceutical dosage forms. | Expansion of the range of products subject to the reference pricing system. |
| 2014 | Order of 19 January 2014 | Addition of new medicines, strengths, and pharmaceutical dosage forms. | Increasing the importance of price comparisons between equivalent products. |
| 2015 | Order of 15 February 2015 | Further expansion and consolidation of the reference pricing list. | Necessity for pharmaceutical companies to adjust product prices in response to regulatory amendments. |
| 2017 | Order of 29 August 2017 | Introduction of 28 new reference prices and revision of 18 existing ones. | Strengthening the link between pharmaceutical pricing and prevailing market prices. |
| 2023 | Order of 26 January 2023 | Updating the list and adding new reimbursable medicines. | Intensification of competition and growing importance of product portfolio management. |
| 2024 | Order of 20 July 2024 | Further expansion of the list through the inclusion of additional products and pharmaceutical units. | Strengthening regulatory compliance and adapting pricing positioning strategies. |

**Source:** Prepared by the researcher based on the ministerial orders published in the Official Journal of the Algerian Republic (2006, 2008, 2009, 2014, 2015, 2017, 2023, and 2024).

An analysis of regulatory developments between 2005 and 2024 shows that the reference pricing system has evolved from a reimbursement mechanism into an important instrument shaping the economic and competitive environment of Algeria's pharmaceutical industry. Its impact is reflected in four main areas. First, it has shifted competition from brand differentiation towards price competitiveness, as the adoption of the International Nonproprietary Name (INN) has increased the importance of comparing medicines containing the same active ingredient and their prices relative to the reference reimbursement level. Second, it has encouraged the development and marketing of generic medicines by creating incentives for lower-priced alternatives, potentially strengthening the position of domestic generic manufacturers. Third, it has constrained companies' pricing strategies, requiring them to consider reference prices, competitors' prices, production and import costs, profit margins, social security coverage, and consumers' purchasing power. Finally, successive regulatory amendments, particularly those introduced in 2017, 2023, and 2024, have increased the need for companies to monitor regulatory changes and continuously adapt their pricing and marketing strategies.

- **Pharmaceutical Reimbursement Policies**

Algeria's social security system is structured around a number of public institutions responsible for administering social protection schemes and providing insurance coverage to different

BULLETIN OF
CZECH ECONOMETRIC SOCIETY
www.bulletin-ces.cz
ISSN 1212-074X | VOLUME 33 | ISSUE 1 | 2026

occupational and social categories. The National Social Security Fund for Salaried Workers (CNAS) is responsible for managing social insurance schemes for salaried employees and their dependants, covering various risks, including sickness, maternity, disability, and death, as well as occupational accidents and diseases. By contrast, the National Social Security Fund for Non-Salaried Workers (CASNOS) provides social security coverage for self-employed individuals, including traders, artisans, professionals, and farmers. Its coverage extends to sickness, maternity, disability, and death, in addition to retirement benefits. The National Retirement Fund (CNR) is responsible for administering retirement pensions and safeguarding entitlements related to old age. Meanwhile, the National Unemployment Insurance Fund (CNAC) manages the unemployment insurance scheme and contributes to implementing programmes aimed at reintegrating unemployed individuals into the labour market, as well as supporting the establishment of micro-enterprises. Furthermore, the National Fund for Paid Leave and Unemployment Due to Inclement Weather in the Construction, Public Works and Irrigation Sectors (CACOBATPH) administers compensation schemes relating to paid leave and work interruptions resulting from adverse weather conditions in these sectors (AAPI, 2026). These institutions operate within an institutional framework under the supervision of the Ministry of Labour, Employment and Social Security. Each institution has legal personality and financial autonomy, in accordance with the legislative and regulatory provisions governing its activities.

**4. The Digital Challenge**

The pharmaceutical sector in Algeria is undergoing rapid digital transformation, requiring its various stakeholders to adapt to the emerging demands of the healthcare system. Digital technologies offer promising opportunities to improve the efficiency of pharmaceutical activities, modernize management processes, enhance the quality of healthcare services, and facilitate information exchange. However, the realization of these benefits largely depends on the sector's ability to overcome a range of technological, institutional, and regulatory challenges that may hinder the pace and effectiveness of digital transformation.

- **Institutional Mechanisms and Initiatives Adopted in Algeria**

Algeria provides citizens and various stakeholders involved in the healthcare sector and pharmaceutical regulation with access to relevant sectoral information through the official website of the Ministry of Health, Population and Hospital Reform (World Bank Group, 2020). The national drive towards healthcare digitalization forms part of a broader public policy aimed at modernizing public administration, reducing paper-based transactions, and streamlining administrative procedures, ultimately seeking to establish a paperless working environment for healthcare professionals (Habchi, 2025). Within this framework, several initiatives and projects have been launched to promote the adoption of digital solutions and develop the technological infrastructure of the healthcare and pharmaceutical sectors.

This commitment to digital transformation is reflected in the development of various electronic portals and digital platforms designed to improve administrative management, strengthen epidemiological surveillance systems, and facilitate access to healthcare services. At the administrative level, the Human Resources Portal (RH Portal) enables the monitoring of employees' career progression, while the Promotion Portal (PROMOTION) allows their personal and professional records to be updated and their eligibility for promotion to be

BULLETIN OF
CZECH ECONOMETRIC SOCIETY
www.bulletin-ces.cz
ISSN 1212-074X | VOLUME 33 | ISSUE 1 | 2026

monitored. These platforms contribute to enhancing administrative transparency and improving the efficiency of administrative procedures.

Beyond these initiatives, digital solutions have also been extended to the delivery of direct medical services through teleconsultation platforms, which provide access to free medical consultations and enable patients to book appointments online. In addition, the DOKTA and SEHA-TECH platforms contribute to facilitating communication between patients and healthcare providers, improving access to pharmacies, and streamlining medical appointment scheduling (Bouhadjeb & Terbeche, 2026).

- **Digitalization Challenges in the Pharmaceutical Supply Chain**

Digitalization is a key tool for improving the efficiency of the pharmaceutical supply chain in Algeria. It enables the monitoring of medicine flows from production or importation to final distribution, facilitates real-time inventory monitoring, and strengthens coordination among manufacturers, distributors, pharmacies, and hospitals. These improvements can help reduce the risk of medicine shortages and enhance product traceability (Bouhadjeb & Terbeche, 2026).

In this context, the REQUETEMEDIC platform has emerged as one of Algeria's digital initiatives aimed at tracking pharmaceutical products throughout the production, distribution, and storage stages. It also seeks to improve supply management and address medicine shortages. Similarly, the Electronic Pharmacy Project represents a step towards better inventory management and expenditure control by enabling healthcare institutions to identify their pharmaceutical needs more rapidly and reduce supply disruptions (Mezouaghi, 2026; Habchi, 2025).

From a technological perspective, emerging technologies such as blockchain and artificial intelligence offer opportunities to strengthen the reliability of traceability systems and data security. They can improve product monitoring and facilitate batch recalls when necessary, thereby promoting transparency and trust among supply chain stakeholders while supporting compliance with regulatory requirements (TEDJAR, 2025). However, the effective implementation of these solutions remains dependent on the sector's ability to overcome challenges related to digital infrastructure, investment costs, and human resource training.

- **The Impact of Digitalization and Implementation Challenges**

Digital transformation in the healthcare sector offers significant opportunities to improve the performance of healthcare institutions and enhance the quality of services provided. It contributes to greater management efficiency, faster information processing and exchange, and stronger transparency and accountability in the management of healthcare resources. Furthermore, it can expand access to medical services, reduce inequalities in healthcare provision, and support the sustainability of the healthcare system and its capacity to respond to population health needs (Habchi, 2025).

However, achieving these benefits does not simply depend on introducing technology and adopting electronic platforms; rather, it requires ensuring that digital solutions are suited to the actual conditions of healthcare institutions and their capacity to implement them. In this regard, the concept of the "Gap between Reality and Design", discussed by Heeks in his studies on e-government projects in developing countries, highlights the implementation difficulties faced by many such initiatives. Some projects may ultimately fail because of a mismatch between the assumptions and expectations established during the planning stage and actual conditions,

BULLETIN OF
CZECH ECONOMETRIC SOCIETY
www.bulletin-ces.cz
ISSN 1212-074X | VOLUME 33 | ISSUE 1 | 2026

particularly in terms of technological capabilities, predefined objectives, administrative capacities, and available financial resources (Heeks, 2002).

According to Bouhadjeb and Terbeche (2026), the challenges facing healthcare digitalization in Algeria can be grouped into six interrelated dimensions. These include technical barriers, associated with inadequate telecommunications infrastructure and insufficient planning for the development of healthcare software; human resource barriers, resulting from limited digital skills, inadequate training, and the uneven distribution of healthcare personnel; and organizational and regulatory barriers, related to bureaucracy, fragmented standards, and limited legal recognition of electronic documents. Additional challenges include cybersecurity risks, arising from the growing threats targeting healthcare institutions; financial constraints, stemming from limited funding and the high costs of digital equipment and systems; and finally, geographical barriers, which widen the digital divide, particularly in rural and remote areas, due to inadequate internet coverage and difficulties in ensuring equitable access to healthcare services.

Based on the above, the success of digital transformation in the Algerian healthcare sector ultimately depends on the ability to align technological requirements with available human, organizational, and financial capacities. Such alignment is essential to transforming digital initiatives from mere technological tools into effective mechanisms for improving healthcare system performance and service quality.

**5. Discussion**

The findings of this study show that pharmaceutical marketing in Algeria operates within a specific regulatory and institutional framework that significantly shapes companies' marketing strategies. Unlike conventional consumer markets, pharmaceutical companies have limited freedom in their marketing activities. Requirements related to marketing authorisation and evidence of product quality, safety, and efficacy, alongside restrictions on public advertising and medical promotion, define the scope of permissible practices. In this context, regulation does not eliminate pharmaceutical marketing but redirects it towards more specialised, ethical, and scientifically grounded approaches. Regulatory compliance, therefore, becomes an essential part of marketing strategy, while scientific credibility and accurate communication contribute to building trust and strengthening companies' market positions.

These constraints are particularly evident in promotional activities, as companies mainly rely on professional communication with physicians, pharmacists, and other healthcare professionals. This takes place through medical representatives, scientific documentation, professional meetings, and authorised promotional activities. Consequently, pharmaceutical promotion focuses less on mass advertising and more on providing reliable and scientifically supported information to professional audiences.

The findings also highlight the multi-stakeholder nature of the Algerian pharmaceutical market. Unlike conventional markets, pharmaceutical decision-making involves several actors: physicians prescribe medicines, pharmacists dispense them and advise patients, while public institutions and social security organisations influence financing, distribution, and reimbursement. The Ministry of Health and the National Agency for Pharmaceutical Products oversee regulatory requirements, while the Central Pharmacy of Hospitals contributes to

BULLETIN OF
CZECH ECONOMETRIC SOCIETY
www.bulletin-ces.cz
ISSN 1212-074X | VOLUME 33 | ISSUE 1 | 2026

supplying healthcare institutions. These interactions make cooperation and responsible communication essential to pharmaceutical marketing.

Pricing and reimbursement policies also significantly influence companies' marketing and competitive strategies. Reference pricing, regulated distribution margins, and centralised price determination limit companies' pricing flexibility while aiming to control pharmaceutical expenditure, protect patients' purchasing power, and improve access to treatment.

Digital transformation represents another important factor reshaping pharmaceutical marketing and supply chain management in Algeria. Digital solutions can improve inventory management, product traceability, and coordination among manufacturers, distributors, pharmacies, and hospitals, while helping reduce supply disruptions and medicine shortages. However, their effective implementation depends on adequate resources, skilled human resources, and appropriate regulatory frameworks.

Overall, pharmaceutical marketing in Algeria requires balancing commercial objectives with regulatory requirements and public health priorities. Companies must therefore adopt ethical promotional practices, provide reliable scientific information, support the availability of medicines, and contribute to their rational use. Cooperation with healthcare institutions and participation in awareness and health education initiatives can further strengthen their role. Accordingly, pharmaceutical marketing effectiveness should be assessed not only through commercial performance but also through its contribution to improving access to medicines and protecting public health.

## 6. Conclusion and recommendations

The study concludes that the marketing mix of pharmaceutical companies in Algeria is shaped not only by market conditions and competitive considerations but also, to a considerable extent, by the institutional and regulatory framework governing the pharmaceutical sector. Companies' decisions regarding product, pricing, distribution, and promotion are not entirely driven by commercial discretion; rather, they are influenced by a set of laws, regulations, and institutional interventions that impose specific constraints on these activities. Accordingly, the formulation and implementation of marketing strategies in this sector require companies to balance their commercial objectives with regulatory compliance requirements and public health protection. This is further evidenced by the legislative evolution of the pharmaceutical industry in Algeria.

The study recommends continuing to update the legal and regulatory framework governing the pharmaceutical sector and strengthening coordination among its stakeholders. It also highlights the importance of supporting local production, encouraging investment and public-private partnerships, and assisting start-ups to promote innovation and competitiveness. Furthermore, regulatory oversight of pharmaceutical promotion should be strengthened to ensure compliance with ethical standards, while pricing and reimbursement policies should balance patients' purchasing power with the economic sustainability of pharmaceutical companies. Improving inventory management, demand forecasting, and distribution networks is also essential to reducing medicine shortages and geographical disparities in access. Finally, the study emphasises the need to accelerate digital transformation through the development of a secure national health information platform, stronger data protection, specialised human resource training, and regular evaluation of digitalisation initiatives.

BULLETIN OF
CZECH ECONOMETRIC SOCIETY
www.bulletin-ces.cz
ISSN 1212-074X | VOLUME 33 | ISSUE 1 | 2026

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ISSN 1212-074X | VOLUME 33 | ISSUE 1 | 2026

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BULLETIN OF
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www.bulletin-ces.cz
ISSN 1212-074X | VOLUME 33 | ISSUE 1 | 2026

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