

The Impact of Pricing Strategy on the Competitiveness of Essential Oils in the Domestic Market: An Empirical Study of Enterprises in the Medicinal and Aromatic Plants and Essential Oils Sector in Algeria

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Abstract:

This study aims to analyze the impact of pricing strategy on enhancing the competitiveness of essential oils produced by enterprises operating in the field of medicinal and aromatic plants and essential oils in Algeria. An empirical study was conducted on a sample of enterprises operating in this sector, using a questionnaire to assess the extent to which they adopt pricing approaches based on costs, competition, and consumers' perceptions of value and quality.

The findings reveal a statistically significant relationship and effect between pricing strategy and the improvement of the competitiveness of these products in the domestic market, particularly through increased sales, enhanced customer loyalty, and a strengthened market share.

The study recommends developing flexible pricing policies that are responsive to market dynamics and the purchasing power of Algerian consumers.

Keywords: Pricing Strategy; Competitiveness; Essential Oils; Medicinal and Aromatic Plants; Domestic Market.

Introduction:

Global markets, and the Algerian market in particular, are witnessing growing interest in natural products derived from medicinal and aromatic plants, particularly essential oils. These products possess therapeutic, cosmetic, and nutritional properties that have enabled their use across a wide range of industries, including alternative medicine, cosmetics, food processing, and pharmaceuticals. This growing demand reflects a broader shift in consumer preferences toward natural and health-oriented products as alternatives to conventional chemical-based products.

Price is one of the key determinants of the market success of these products. It constitutes an important reference point in consumers' perceptions of product value, influences their purchasing power and willingness to purchase, and reflects the ability of producing enterprises to strike a delicate balance between production, distribution, and promotional costs on the one hand, and the requirements

of the domestic market, characterized by economic fluctuations and heterogeneous consumer segments, on the other.

However, many enterprises operating in this field face significant challenges in formulating effective pricing policies that can adapt to continuous market changes and remain compatible with the purchasing power of Algerian consumers, particularly in the context of growing competition from imported products and volatile global prices of raw materials.

Research Problem:

Against this backdrop, the present study examines the extent to which the pricing strategies adopted by Algerian enterprises operating in the field of medicinal and aromatic plants influence the competitiveness of their essential oil products. Accordingly, the study seeks to address the following research question:

To what extent do the pricing strategies adopted by enterprises operating in the field of medicinal and aromatic plants in Algeria contribute to enhancing the competitiveness of essential oils in the domestic market?

Research Significance:

This study derives its significance from its focus on a promising economic sector in Algeria, namely the production and marketing of essential oils derived from medicinal and aromatic plants, which is experiencing growing demand in both domestic and international markets. The significance of the study can be viewed from two principal perspectives. The scientific dimension lies in enriching the academic literature on the role of pricing strategies in enhancing the competitiveness of natural products. The practical dimension consists in providing enterprises operating in this sector with practical insights and recommendations to improve their pricing policies in accordance with the specific characteristics and challenges of the domestic market, thereby contributing to improved marketing performance and increased market share. The study also has a developmental dimension, as it supports national efforts toward economic diversification and the promotion of sustainable, value-added industries.

Research Objectives:

This research paper aims to:

- Analyze the pricing strategies adopted by enterprises operating in the field of medicinal and aromatic plants and essential oils in Algeria.
- Assess the impact of pricing strategy on the competitiveness of essential oils in the domestic market.
- Examine the relationship between pricing policies and factors such as customer loyalty, market share, and competitiveness.
- Provide practical recommendations for enterprises to strengthen their pricing policies in ways that support business sustainability.

Research Hypotheses:

To achieve the objectives of the study, the following hypotheses were formulated:

- There is a statistically significant relationship, at the 5% significance level, between pricing strategy and the competitiveness of essential oils in the domestic market among the enterprises operating in the field of medicinal and aromatic plants and essential oils under study in Algeria.
- Pricing strategy has a statistically significant effect, at the 5% significance level, on the competitiveness of essential oils in the domestic market among the enterprises operating in the field of medicinal and aromatic plants and essential oils under study in Algeria.

Research Model:

Figure 1: Proposed Research Model



Source: Developed by the researchers.

Research Methodology:

The study adopts a descriptive-analytical approach by examining and analyzing the relevant research material and synthesizing the resulting findings. It also employs a content analysis approach through the examination of selected references and sources related to pricing strategy, as well as a review of previous studies to clarify the conceptual meaning and determinants of essential oil competitiveness in the domestic market.

The study is structured into the following sections:

- **Section One:** An Introduction to Pricing Strategies;
- **Section Two:** Competitiveness in Domestic Markets;
- **Section Three:** The State of the Medicinal and Aromatic Plants and Essential Oils Sector in Algeria;
- **Section Four:** The Empirical Study.

1. An Introduction to Pricing Strategies

Pricing strategies constitute one of the fundamental pillars of successful marketing activity, as they determine an enterprise's ability to achieve both profitability and competitiveness. Pricing is not merely a matter of setting a product's price; rather, it encompasses a set of policies and mechanisms that take into account production costs, competitors' pricing behavior, and consumers' perceptions of value and quality. In an increasingly competitive and rapidly changing market environment, the formulation of effective pricing strategies has become particularly important, requiring flexibility and the capacity to adapt to economic challenges and customer requirements in ways that support business sustainability and strengthen the enterprise's market position.

1.1 Definition and Importance of Pricing

1.1.1 Definition of Pricing

Pricing refers to “the value assigned to a particular good or service and expressed in monetary terms” (Hasani & Houhou, 2021, p. 256). It is also defined as “an ongoing process through which an enterprise prices its products in a manner that ensures consumer satisfaction while contributing to the achievement of the enterprise’s objectives” (Albarzakhy & Alberouazi, 2008, p. 187). From another perspective, pricing represents “one of the most important strategic decisions affecting the success of an enterprise. The importance of pricing decisions derives not only from their impact on the marketing mix as one of its elements, but also from their broader implications for overall organizational performance. In addition to contributing to profitability, pricing decisions can serve as an effective instrument for attracting new consumers to the enterprise for certain categories of products” (Abu Qahf, 2002, p. 469).

Accordingly, pricing may be understood as the process through which the monetary value of goods or services is determined in alignment with the enterprise’s objectives and marketing strategies, based on a range of influencing factors, including production costs, demand, competition, and the economic and social conditions prevailing in the target market. The concept also encompasses the practical procedures adopted by an enterprise to determine product prices, including the selection of an appropriate pricing strategy, monitoring market responses, and making continuous adjustments to maintain an appropriate balance among profitability, market share, and customer satisfaction.

1.1.2 Importance of Pricing

Price represents the set of sacrifices made by a customer in order to obtain a service. It therefore serves as the financial mechanism through which the exchange between the service provider and the beneficiary takes place. Such an exchange should provide sufficient value to the consumer while simultaneously enabling the service provider to achieve its financial objectives. Accordingly, pricing plays an important role in the development of marketing strategy and can serve a number of strategic purposes (Al-Ibrahim, Darwish, & Shanno, 2010, p. 6), including:

- Adopting a low-price strategy at the beginning of the life cycle of new services in order to facilitate entry into new markets;
- Using competitive pricing to maintain the service’s market share;
- Adopting premium pricing in enterprises pursuing financial objectives, thereby enabling them to achieve their desired financial returns. When a service enterprise has a distinctive market image, management can more readily establish prices consistent with that image, while customers may be willing to pay amounts commensurate with the perceived image and the psychological as well as functional benefits it provides.

The importance of price becomes even more pronounced when differentiation among services is difficult to perceive. Under such circumstances, an increase in price may lead to lower demand and may also trigger competitive responses. Pricing decisions should therefore be aligned with service quality, enabling customers to make informed choices without being misled.

1.2 Factors Influencing Pricing Decisions

Pricing decisions are determined by a range of factors, some internal to the enterprise and others external to it; The following sections outline the principal factors influencing pricing decisions.

1.2.1 Internal Factors

- a. **Marketing Objectives:** Marketing managers determine product prices in accordance with the enterprise's objectives and mission. If management seeks to establish a distinctive position and perceived value in the market, the prices set for its products should logically be consistent with their level of quality. Nevertheless, pricing decisions must take into account the enterprise's fundamental objectives. Thus, pricing decisions should derive from the enterprise's overall objectives rather than simply pursuing higher prices on the assumption that price should correspond to quality (Albakri, 2006, p. 359).
- b. **Cost:** Cost is a critical element in determining product prices. Many enterprises establish prices by adding a predetermined profit margin to the total cost required to produce the product. Product costs generally take two principal forms (Taha, 2003, p. 639):
 - **Fixed costs:** Costs that do not vary with changes in production or sales volumes, such as rent.
 - **Variable costs:** Costs that vary according to production and sales levels, such as the cost of raw materials. Total cost is the sum of fixed and variable costs.
- c. **Marketing Mix:** Pricing decisions are influenced by the other elements of the marketing mix. With respect to the product, setting higher prices may reduce the number of units sold, which can increase unit production costs. Conversely, lower prices may stimulate sales and reduce the cost per unit. Although product, quality, and brand are closely interconnected, these relationships also influence the extent to which price is associated with the product (Albakri, 2006, p. 360).
- d. **Organizational Considerations:** Organizational considerations constitute another internal factor affecting pricing decisions. A key consideration is the organizational level responsible for pricing, which can have a substantial influence on pricing decisions. Regardless of which organizational level is assigned responsibility for pricing, senior management generally remains primarily responsible for establishing pricing objectives and policies and typically approves prices proposed by lower managerial levels. The enterprise should therefore clearly determine who is responsible for setting product prices, recognizing that enterprises differ in the organizational level to which pricing authority is delegated (Abu Farah, 2008, p. 58).

1.2.2 External Factors

External factors arise from the enterprise's surrounding environment and generally fall outside its direct control. The enterprise must therefore adapt its pricing policy to these environmental conditions. The principal external factors can be summarized as follows:

- a. **Market Structure and Demand:** Different market structures have distinct implications for pricing decisions. The following considerations are particularly relevant (Mohammed, 2012, p. 209):
 - **Under perfect competition:** The enterprise's price is determined at the industry level through the interaction of supply and demand. An increase in price may lead customers to switch to competitors, whereas a decrease in price does not necessarily induce competitors to reduce their own prices.

- **Under monopolistic competition:** The market comprises a relatively large number of buyers and sellers, with products differentiated from one another. Consequently, there is no single prevailing market price.
 - **Under oligopoly:** A relatively small number of producers operate in the market, meaning that the pricing decisions of one enterprise can affect its competitors. A price reduction may induce competitors to reduce their prices, whereas an increase in price does not necessarily lead competitors to raise theirs.
 - **Under monopoly:** The producer generally has greater discretion in determining both price and the quantity supplied, particularly in the absence of government intervention in price regulation or production quotas.
- b. **Competition:** Existing and potential competition is an important determinant of product pricing. Pricing decisions cannot be made independently of the prices of similar or substitute products available in the market. Competitive pressure increases as the number of similar or substitute products rises, making it necessary for enterprises to monitor competitors continuously and adapt their pricing policies in order to remain viable and achieve their targeted market share (Al samidai & Yussuf, 2006, p. 108).
 - c. **Government:** The role of government cannot be overlooked when formulating pricing decisions. Pricing decision-makers must be fully aware of the relevant laws and regulations, as governments in many countries intervene in markets through public pricing policies (Abu Farah, 2008, p. 65).
 - d. **Economic Conditions:** An enterprise's ability to determine prices varies according to prevailing economic conditions. During periods of economic expansion, enterprises generally have greater flexibility to set prices in response to competitive conditions. Conversely, during periods of recession, enterprises may seek to stimulate demand by reducing prices or offering additional products or services alongside the core product (Taha, 2003, p. 643).
 - e. **Suppliers and Distributors:** The various actors involved in the marketing system can significantly influence an enterprise's pricing capacity. Increases in raw-material prices by suppliers or demands by intermediaries for higher profit margins may constrain the enterprise's ability to establish an appropriate price. In some cases, the enterprise may respond by reducing its desired profit margin to avoid passing higher costs on to consumers, substituting alternative inputs, or using alternative distribution channels that perform the same required function (Alsahn & Abbas, 2004, p. 258).

1.3 Types of Pricing Strategies

A pricing strategy can be viewed as a set of principles, methods, and procedures adopted by an enterprise to determine product prices in light of a range of internal and external factors, with the aim of achieving its pricing, marketing, and broader organizational objectives.

A variety of pricing strategies may be formulated to achieve different objectives under varying market conditions and according to the characteristics of the product being priced (Abu Farah, 2008, p. 133). The principal pricing strategies include the following:

1.3.1 Pricing Strategies for New Products

- a. **Market-Skimming Pricing Strategy:** This strategy involves setting the highest feasible price for a new product, accompanied by substantial promotional expenditure, followed by a

gradual reduction in price at a later stage (Albarzakhy & Alberouazi, 2008, p. 197) . It is generally considered a short-term strategy, and its effectiveness is associated with the following conditions (Alsamidai & Assaed, 2007, p. 244):

- Relatively inelastic demand for the product;
- The generation of rapid profits over a short period;
- Recovery of substantial research and development costs;
- Creation of a perception of high quality surrounding the product;
- The possibility of reducing the price at a later stage.

This strategy is particularly suitable for consumers who exhibit relatively low price sensitivity (Albarzakhy & Alberouazi, 2008, p. 198).

- b. Market-Penetration Pricing Strategy:** This strategy is used when introducing a new product to the market and aims to achieve rapid market penetration and growth and to secure the largest possible market share, thereby increasing profitability in the long term (Alsamedai, 2007, p. 221).

Under this strategy, the product is initially offered at a relatively low price in order to rapidly acquire a substantial market share and increase sales volume (Alsamidai & Assaed, 2007, p. 245).

- c. Price Leadership Strategy:** This strategy involves price determination by an enterprise that occupies a leading position in the market, with other market participants generally responding to the price established by the leader (Albarzakhy & Alberouazi, 2008, p. 199).

1.3.2 Pricing Strategies for Existing Products

These include the following strategies (Albarzakhy & Alberouazi, 2008, p. 199):

- a. Price Stability Strategy:** Under this strategy, the price established when the product is initially introduced to the market remains unchanged. The strategy seeks to maintain the product's competitive position, market share, and profitability, while also reinforcing its market image in a relatively stable environment.
- b. Price Reduction Strategy:** This is a defensive strategy employed to respond to competitors or weaken their competitive position. It focuses on responding to consumer needs in a changing market environment. Although it may reduce the profit margin, it can contribute to building a larger market share if the enterprise succeeds in outperforming its competitors.
- c. Price Increase Strategy:** This strategy aims to preserve profitability during periods of inflation. It involves segmenting the market and setting different prices for different segments. Its successful implementation generally requires relatively low price sensitivity and greater sensitivity to other factors, such as quality, distribution, and the support provided by the other elements of the marketing mix.

1.3.3 Price-Flexibility Strategies

These include the following (Alsamidai & Assaed, 2007, pp. 200, 201):

- a. **Uniform Pricing Strategy:** This strategy involves setting a single price for all consumers purchasing the same product under comparable conditions and quantities. It aims to simplify pricing decisions and maintain a favorable reputation among consumers. Its advantages include reducing administrative and selling costs, maintaining a stable profit margin, and fostering a positive product image.

The successful implementation of this strategy requires an assessment of the product's competitive position and cost structure relative to competing products, while also taking consumers' purchasing power into consideration.

- b. **Flexible (Variable) Pricing Strategy:** This strategy aims to maximize short-term profits and support business activity by adjusting product prices. It involves charging different consumers different prices for the same product and requires accurate information concerning consumers and competitors.
- c. **Product-Line Pricing Strategy:** This strategy focuses on determining the price of each product within a product line according to the nature of the relationships among the products, whether complementary or competitive. Its objective is to maximize the profitability of the product line as a whole rather than pricing each product independently.
- d. **Leasing Pricing Strategy:** This strategy involves an enterprise leasing an asset it owns to another party in return for periodic rental payments. It is appropriate for consumers who wish to benefit from a service or asset that they cannot or do not wish to purchase. It enables the lessor to generate long-term returns and may provide tax advantages to the lessee. An example is the leasing of media channels for television broadcasting.
- e. **Pricing Strategy at the Maturity Stage:** It is important to monitor a product's market performance throughout the various stages of its life cycle. During the maturity stage, a rapid price reduction may be appropriate when signs of deterioration in the product's market position begin to emerge.

2. The Nature of Competitiveness in Local Markets:

Competitiveness represents a critical determinant of firms' survival and growth, particularly in the essential oils sector. Pricing strategy constitutes one of the most influential factors shaping competitiveness, as it contributes to strengthening customer loyalty, increasing sales, and enhancing product image. Flexible pricing policies also enable firms to respond effectively to competitive pressures and market fluctuations, thereby supporting organizational stability and maintaining market share.

2-1. Definition of Competitiveness:

Competitiveness has become a central concept in the literature of economics and business management, as it constitutes a fundamental pillar for firms' continuity and growth in an environment characterized by change and volatility. Porter argues that "competitiveness refers to the ability of a firm or a country to achieve high and sustainable productivity, enabling it to compete with rivals in international and domestic markets" (Porter, 1990, p. 73). The Organisation for Economic Co-operation and Development (OECD), meanwhile, defines competitiveness as "the ability of countries or firms to produce goods and services that meet the requirements of international markets, while continuing to improve individuals' real income levels over the long term" (OECD, 1992, p. 25).

In the same context, the World Economic Forum defines competitiveness as "the set of institutions, policies, and factors that determine the level of productivity in a given country, which, in

turn, translates into different levels of prosperity and well-being” (World Economic Forum, 2019, p. 15).

Accordingly, competitiveness may be defined as the ability of firms operating in local markets to enhance their market share and sustain their performance by adopting effective strategies in pricing, innovation, and quality, thereby ensuring that customer needs are met and enabling firms to achieve a competitive advantage over their direct competitors (Gairi, 2020, p. 130).

2-2. Dimensions of Competitiveness and Its Measurement Indicators:

2-2-1. Dimensions of Competitiveness:

Competitiveness in local markets is reflected through a set of interrelated dimensions that determine firms’ ability to survive and achieve outstanding performance. The most prominent dimensions include:

- a. The Production Dimension:** This refers to the firm’s ability to improve the efficiency of resource utilization and reduce costs, thereby strengthening its capacity to compete on price (Porter, 1990, p. 120).
- b. The Innovation Dimension:** This dimension reflects the extent to which a firm relies on research and development and introduces new products as a key factor in gaining a sustainable competitive advantage (OECD, 1992, p. 47).
- c. The Marketing Dimension:** This concerns the firm’s ability to understand and respond to consumer needs through the marketing mix, particularly promotion and distribution (Kotler & Keller, 2016, p. 87).
- d. The Organizational and Managerial Dimension:** This refers to the flexibility of organizational structures, the efficiency of human resources, and the role of management information systems in supporting decision-making (Barney & Hesterly, 2019, p. 46).

Taken together, these dimensions constitute an integrated framework that enables firms to confront competitive pressures in local markets and strengthens their capacity for sustainable growth.

2-2-2. Competitiveness Measurement Indicators:

The level of competitiveness can be assessed using a combination of quantitative, qualitative, and composite indicators.

- a. Quantitative Indicators:** These include export volume, productivity growth, and market share.
- b. Qualitative Indicators:** These are associated with intangible factors such as customer satisfaction, product quality, and market reputation.
- c. Composite Indicators:** One of the most prominent examples is the Global Competitiveness Index (GCI), issued by the World Economic Forum, which integrates economic, human, and institutional dimensions.

These indicators contribute to providing a comprehensive assessment of firms’ competitive capacity in both domestic and international markets (World Economic Forum, 2019, p. 20).

2-3. The Role of Pricing in Enhancing Competitiveness:

Pricing is one of the most important elements of the marketing mix contributing to the development of firms' competitive advantage. It is not merely a tool for covering costs or generating profits; rather, it constitutes a strategic instrument for market positioning (Kotler & Keller, 2016, p. 481). An appropriate pricing strategy enables firms to:

- **Achieve strategic positioning** through prices that reflect the value and quality of the product relative to competing products.
- **Attract diverse consumer segments** by adopting strategies such as penetration pricing and discriminatory pricing (Nagle & Müller, 2018, p. 95).
- **Increase market share** through pricing flexibility, which allows firms to respond to changing market conditions and developments.
- **Enhance organizational sustainability** by achieving a balance between profitability and customer loyalty (Hinterhuber & Liozu, 2012, p. 44).

Accordingly, pricing can be viewed as a strategic instrument capable of supporting a firm's competitiveness in local markets rather than merely constituting a conventional financial decision.

3. The Current State of the Medicinal and Aromatic Plants and Essential Oils Sector in Algeria

The medicinal and aromatic plants and essential oils sector in Algeria is considered a promising sector with substantial economic potential, owing to the country's diverse natural resources and the growing domestic and international demand for natural products. Nevertheless, the sector faces several challenges related to the inadequate utilization of available resources, limited investment, and the need to develop production and marketing practices. These conditions call for effective strategies to strengthen the sector's competitiveness and enhance its value-added potential.

3-1. Overview of the Medicinal and Aromatic Plants and Essential Oils Sector in Algeria

The medicinal and aromatic plants and essential oils sector is an emerging sector with considerable economic potential in Algeria. The country is characterized by extensive ecological and geographical diversity, which provides favorable conditions for the growth of a wide range of plants with therapeutic and aromatic value. According to data from the Ministry of Agriculture and Rural Development, Algeria possesses more than 4,000 plant species, approximately 500 of which have potential therapeutic and industrial applications. The sector contributes to the country's efforts toward sustainable development and economic diversification, particularly in light of the relative decline in hydrocarbon revenues, which accounted for approximately 97% of foreign-exchange earnings until 2021 (Ministry of Agriculture and Rural Development, 2002, p. 18).

The sector also offers opportunities for developing value-added processing industries, including pharmaceutical, cosmetic, and food industries (Lambin & Isabelle, 2012, p. 203). It is worth noting that the National Agency for Support and Development of Entrepreneurship (ANADE) seeks to promote the production and export of essential oils by supporting micro-enterprises, which is considered important for expanding the sector and meeting growing demand in industrial, healthcare, and food-related applications (Algeria Press Service (APS), 2023, p. 2).

A relevant example is the case of Aromabiol, a company based in Bordj Bou Arréridj that began operations in 2018, focusing on the extraction of natural essential oils. Despite its limited resources,

the company has succeeded in producing oils such as geranium, juniper, and lavender, although the domestic market remains largely dependent on imports (Les Champions Économiques, 2023, p. 15).

3-2. Opportunities and Challenges Facing the Medicinal and Aromatic Plants and Essential Oils Sector in Algeria:

3-2-1. Challenges:

The medicinal and aromatic plants and essential oils sector in Algeria faces several challenges, including:

- **Weak industrial and research infrastructure:** A limited number of companies rely on incomplete supply chains and operate without stringent quality standards, which constrains the sector's international competitiveness (Les Champions Économiques, 2023, p. 17).
- **Insufficient development of aromatic plant resources:** Only approximately 600 plant species out of 3,000 species considered potentially exploitable for economic valorization have been utilized (Agroligne, 2022, p. 8).
- **High dependence on imports:** A large share of the medicinal plants, plant extracts and essential oils consumed in Algeria is imported, while local production remains limited (Les Champions Économiques, 2023).

3-2-2. Opportunities

The sector in Algeria presents promising opportunities that could enable it to become one of the pillars of sustainable economic development. These opportunities include:

- **Government institutional support:** The National Agency for Support and Development of Entrepreneurship (ANADE) seeks to empower small agricultural enterprises and connect them with domestic and international markets, thereby strengthening their productive capacities and expanding their marketing opportunities (APS, 2023).
- **Growing global demand:** The global market is witnessing increasing demand for natural products, particularly in cosmetics, aromatherapy, and food industries, providing a strategic outlet for Algerian exports (Algeria Invest, 2023).
- **Youth success stories:** The experience of Samira Kessab, for example, demonstrates how university research can be transformed into an innovative natural-oil production project, thereby contributing to the application of scientific knowledge in support of the local economy (Algeria Invest, 2023).
- **High market value of certain products:** Prickly pear seed oil, for instance, commands relatively high prices in international markets according to a CIHEAM report, representing a significant opportunity for Algerian producers if extraction technologies and quality standards are further developed (CIHEAM, 2022, p. 12).

3-3. The Importance of Essential Oils to the Algerian Local Economy

Essential oils play a significant role in supporting the national economy. Their main areas of economic importance can be summarized as follows:

- **Generating value added for farmers and rural communities:** The transformation of raw plant materials into high-value products such as essential oils contributes to increasing local income (Les Champions Économiques, 2023, p. 19).
- **Supporting processing industries:** Essential oils are used in a variety of industries, including cosmetics, food processing, and healthcare, thereby creating employment opportunities and contributing to the development of rural areas (El Watan, 2023, p. 14).
- **Contributing to national economic diversification:** The development of this sector can help reduce excessive dependence on the hydrocarbon sector and generate alternative and sustainable sources of income.
- **Strengthening marketing competitiveness:** This is supported by the growing global orientation toward natural products, together with Algeria's extensive and diverse botanical resources (CIHEAM Press Review).

4. Empirical Study:

4-1. Population and Sample of the Study:

The study population comprises managers and administrative employees working in institutions operating in the field of medicinal and aromatic plants and essential oils in Algeria. A purposive sample of 50 respondents was selected from the following institutions: BIOSOURCE (Sarl Biosource), BIOPAM SPA, and Aromabiol.

4-2. Data Collection Instrument:

Based on the objectives and variables of the study and the proposed conceptual model, a structured questionnaire was designed as the primary data collection instrument. The questionnaire consisted of two sections:

- **Section One:** This section focused on the pricing strategy adopted by Algerian institutions operating in the field of medicinal and aromatic plants and essential oils in Algeria and comprised 8 statements.
- **Section Two:** This section included statements related to the competitiveness of essential oils in the domestic market and comprised 8 statements.

4-3. Validity and Reliability of the Study Instrument:

Table 01. Internal Consistency Reliability Coefficients for the Study Variables Using Cronbach's Alpha

Study Variables	Cronbach's Alpha
Pricing Strategy	0,807
Competitiveness of Essential Oils in the Domestic Market	0,799

Source: Prepared by the researcher based on SPSS outputs

As shown in Table 1, the reliability coefficients of the study variables ranged between (0.79) and (0.80). Accordingly, all coefficients exceeded the minimum acceptable threshold of (0.60), indicating an acceptable level of internal consistency and supporting the reliability and suitability of

the questionnaire for analyzing the results, answering the research questions, and testing the study hypotheses.

4-4. Descriptive Analysis of the Respondents' Responses:

Table 2. Means and Standard Deviations of the Study Variables

Table 02. Arithmetic Means and Standard Deviations for the Study Variables

Study Variables	Arithmetic Mean	Standard Deviation	Trend
Pricing Strategy	3.7500	0.71962	Agree
Competitiveness of Essential Oils in the Domestic Market	3.7325	0.62117	Agree

Source: Prepared by the researchers based on SPSS outputs

The results presented in Table 2 indicate a high level of agreement among respondents with the statements measuring the independent variable, namely the pricing strategy of Algerian institutions operating in the field of medicinal and aromatic plants and essential oils. This is reflected in the overall weighted mean of (3.7500), which falls within the “Agree” category. The standard deviation was (0.71962), which is below one, indicating a relatively high degree of consistency among respondents' answers and limited dispersion in their perceptions regarding this dimension.

The respondents' perceptions also indicate a positive association between the pricing strategies adopted by Algerian institutions operating in the field of medicinal and aromatic plants and essential oils and the competitiveness of essential oils in the Algerian domestic market. This is reflected in the mean score of the dependent variable, which reached (3.7325), while the standard deviation was (0.62117). The value below one indicates a relatively high degree of homogeneity in respondents' answers and limited variability in their perceptions.

Accordingly, it can be inferred that the pricing strategies adopted by institutions operating in this sector have had a positive and tangible effect on their marketing and competitive performance. The findings indicate that these pricing policies contributed to increasing sales volume and improving the market position of the institutions, while enabling them to retain existing customers and attract new ones through diversified distribution channels. Moreover, aligning prices with consumers' purchasing power appears to have supported institutional continuity and market stability. These strategies also contributed to strengthening the brand image of the products by positioning them as high-quality offerings. Furthermore, clear and balanced pricing policies, combining profitability objectives with the preservation of competitive capacity, enabled these institutions to progressively increase their market share. This reflects a relatively mature approach to price management as a strategic instrument for achieving growth and expansion objectives.

4-5. Hypothesis Testing and Analysis of Results:

- Testing the First Research Hypothesis:

Table 3. Test of the Relationship Between the Study Variables

Variables	R	T	α
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Pricing Strategy → Competitiveness of Essential Oils in the Domestic Market	0.783	8.709	0.000
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Source: Prepared by the researcher based on SPSS outputs

The results presented in Table 3 indicate that the model is statistically significant. The calculated t-value was (8.709), which is statistically significant at the 0.05 significance level. This result indicates the existence of a statistically significant relationship between pricing strategy and the competitiveness of essential oils in the domestic market among institutions operating in the field of medicinal and aromatic plants and essential oils in Algeria.

The results also indicate a strong positive correlation between pricing strategy and the competitiveness of essential oils in the Algerian domestic market, with a Pearson correlation coefficient of (0.783), which is statistically significant at the 0.05 significance level.

These findings support the first research hypothesis, which states:

“There is a statistically significant relationship, at the 5% significance level, between pricing strategy and the competitiveness of essential oils in the domestic market among the institutions operating in the field of medicinal and aromatic plants and essential oils in Algeria under study.”

- Testing the Second Research Hypothesis:

Table 4. Simple Linear Regression Analysis of the Effect of Pricing Strategy on the Competitiveness of Essential Oils in the Domestic Market among the Institutions Operating in the Field of Medicinal and Aromatic Plants and Essential Oils in Algeria

Model	Sum of Squares	Degrees of Freedom	Mean Square	F	SignificanceLevel
Regression	11.578	1	11.578	75.839	0.000
Residual	7.328	48	0.153		
Total	18.907	49	/		
A= 1,199	B= 0,676	R = 0,783	R² = 0,612		

Source: Prepared by the researchers based on SPSS output.

In light of this hypothesis, a functional relationship was formulated between the dependent variable, namely the **competitiveness of essential oils in the domestic market (Y)**, and the explanatory variable, namely **pricing strategy (X)**. The regression model is expressed as follows:

$$Y = \alpha + \beta X$$

Based on the estimated coefficients, the regression equation is:

Competitiveness of essential oils in the domestic market = 1.199 + 0.676 (Pricing Strategy)

The results presented in the above table indicate a statistically significant relationship between the study variables. The correlation coefficient between pricing strategy and the competitiveness of essential oils in the domestic market was (0.783). The coefficient of determination (R^2) was (0.612), indicating that 61.2% of the variation in the competitiveness of essential oils in the domestic market can be statistically explained by variations in pricing strategy.

The findings further demonstrate a statistically significant effect of pricing strategy on the competitiveness of essential oils in the domestic market. This effect is supported by the F-statistic of (75.839), with a statistical significance level of Sig. = 0.000. Accordingly, the regression model is statistically significant and provides empirical support for the proposed relationship between the two variables.

On this basis, the main research hypothesis is supported, stating:

“There is a statistically significant effect, at the 5% significance level, of pricing strategy on the competitiveness of essential oils in the domestic market among the institutions operating in the field of medicinal and aromatic plants and essential oils in Algeria under study.”

Conclusion:

This study examined the extent to which pricing strategy affects the competitiveness of essential oils in the domestic market from the perspective of employees working in institutions operating in the field of medicinal and aromatic plants and essential oils in Algeria. The findings are based on an empirical study conducted among employees of the institutions under investigation. The collected data were statistically analyzed using SPSS Version 27. The study yielded the following results and recommendations:

Findings:

The study reached the following findings:

- There is a statistically significant relationship, at the 5% significance level, between pricing strategy and the competitiveness of essential oils in the domestic market among the institutions operating in the field of medicinal and aromatic plants and essential oils in Algeria under study.
- There is a statistically significant effect, at the 5% significance level, of pricing strategy on the competitiveness of essential oils in the domestic market among the institutions operating in the field of medicinal and aromatic plants and essential oils in Algeria under study.
- Institutions operating in this sector rely on cost-based pricing, competition-based pricing, and value-based pricing as key approaches to pricing their products.
- Flexible pricing policies have had a positive role in attracting new customers and increasing sales.
- Current pricing practices have contributed to retaining customer loyalty and opening new distribution channels.
- Aligning prices with the purchasing power of Algerian consumers represents a critical factor in the continuity and sustainability of these institutions.

Recommendations:

The following recommendations may be proposed:

- Strengthen research and development activities to develop innovative pricing methods based on market analysis and consumer behavior.

- Expand government support programs for small and medium-sized enterprises operating in the field of medicinal and aromatic plants, including both financial and technical support.
- Develop integrated marketing strategies combining pricing, promotion, and distribution in order to strengthen competitiveness in both domestic and international markets.
- Adopt dynamic pricing policies that can adapt to market fluctuations while maintaining a balance between profitability and price attractiveness.
- Enhance consumer awareness of the added value of locally produced essential oils compared with imported alternatives through effective marketing and promotional campaigns.

Appendices:

The questionnaire used in the study is available at the following link:

<https://docs.google.com/forms/d/1ZQIE6Y6L6kwJDocfmxZmuttif64zazasvx0fhMDwc2k/preview>

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