DOKUZ EYLÜL UNIVERSITY
GRADUATE SCHOOL OF SOCIAL SCIENCES
DEPARTMENT OF INTERNATIONAL BUSINESS AND TRADE
FOREIGN TRADE PROGRAM
MASTER'S THESIS

MEDICAL AROMATIC PLANTS AND ESSENTIAL OILS EXPORT POTENTIAL AND MARKET ANALYSIS

Gonca ATAK

Supervisor
Prof.Dr. Gülüzar KURT GÜMÜŞ

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Prof. Dr. Asuman ALTAY
Müdür

DECLERATION

I hereby declare that this doctoral thesis titled as “Medicinal and Aromatic Plants and Essential Oils Export Performance” has been written by myself in accordance with the academic rules and ethical conduct. I also declare that all materials benefited in this thesis consist of the mentioned resources in the reference list. I verify all these with my honor.

Date

03/10/2024

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Signature

ABSTRACT

Master's Thesis

Medical and Aromatic Plants and Essential Oils Export Potential and Market Analysis

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Dokuz Eylül University
Graduate School of Social Sciences
Department of International Trade and Business
Master of Foreign Trade

The use of Medicinal and Aromatic Plants (MAPs), present in numerous plants and products, dates to ancient times. Humans have utilized these products for therapeutic and various other purposes. Moreover, MAPs are employed to create diverse products like essential oils and solvent extracts used in food, cosmetics, and pharmaceuticals. These value-added products have also been commercialized globally. Turkey is advantageous in terms of its geopolitical structure and rich flora. The production, cultivation, and export activities of these products are also prominent in Turkey.

Recently, the demand for MAPs and essential oils has surged, gaining worldwide importance due to their health benefits. Consumers generally prefer these products for their natural ingredients. Additionally, interest in alternative medicine has grown, particularly after the COVID-19 pandemic.

The main aim of this study is to show key factors in the export performance of the MAPs and essential oils sector, including drivers, barriers, and challenges in export operations. For this purpose, interviews were conducted with 13 companies in Izmir province, which have export operations in this sector. Market analysis and export potential of MAPs and essential oils were analyzed with the output of the study. The main drivers of export performance identified are marketing, production service quality, supply chain, and networking capabilities.

Keywords: Medicinal and Aromatic Plants, Essential Oils, Export Operations, Export Performance

ÖZET

Yüksek Lisans Tezi

Tıbbi ve Aromatik Bitkiler ve Esansiyel Yağlar İhracat Potansiyeli ve Pazar Analizi

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Tıbbi ve aromatik bitkilerin kullanımı çok eski zamanlara dayanmaktadır. Bu bitkilerin kullanım alanları ve ticari faaliyetleri, tüketicilerin tercihleri ve ihtiyaçları doğrultusunda şekillenmektedir. Tıbbi bitkiler ile esansiyel yağlar; kozmetik, gıda ve farmasötik ürünlerde solvent ekstraktları gibi çeşitli ürünlerin üretiminde kullanılmaktadır. Katma değeri yüksek olan bu ürünlerin ticareti hem uluslararası pazarlarda hem de yerli piyasada gerçekleştirilmektedir. Türkiye, zengin bitki örtüsü ve jeopolitik konumu ile tıbbi ve aromatik bitki yetiştiriciliği için oldukça elverişlidir. Üretim, hasat ve ihracat faaliyetleri de Türkiye'de aktif olarak yürütülmektedir.

Günümüzde tıbbi bitkilere ve esansiyel yağlara olan talep gitgide artmaktadır. Bu ürünler herhangi bir kimyasal barındırmamalarının yanı sıra, modern tıbba alternatif tedavi yöntemlerinin başında gelmektedirler. Doğal içerikli ürünler olmaları tüketiciler tarafından tercih edilmelerindeki en önemli sebeptir. Özellikle Covid-19 salgını sonrasında tüketicilerin doğal içerikli ürünlere olan ilgisinin ve farkındalığının artması bu ürünlere yönelimi pozitif yönde etkilemiştir.

Bu çalışmanın temel amacı, Tıbbi Bitkiler ve Uçucu Yağlar sektörünün ihracat performansını etkileyen itici güçler, engeller ve zorluklar dahil olmak üzere, sektördeki temel faktörleri ortaya koymaktır. Bu doğrultuda, İzmir ilinde ihracat faaliyetleri yürüten 13 firma ile görüşmeler yapılmıştır. Çalışmanın sonuçları, tıbbi ve aromatik bitkiler ile uçucu yağların pazar analizi ve ihracat

potansiyelini değerlendirmeyi amaçlamaktadır. İhracat performansını belirleyen başlıca faktörler arasında pazarlama, üretim ve hizmet kalitesi, tedarik zinciri yönetimi ve ağ oluşturma yetenekleri öne çıkmaktadır.

Anahtar Kelimeler: Tıbbi ve Aromatik Bitkiler, Esansiyel Yağlar, İhracat Operasyonları, İhracat Performansı

MEDICINAL AROMATIC PLANTS AND ESSENTIAL OILS EXPORT PERFORMANCE AND MARKET ANALYSIS

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ABBREVATIONS

EFEO	European Essential Oil Federation
EU	European Union
FDA	Food and Drug Administration
FDI	Foreign Direct Investment
HS CODE	The Harmonized System Code
ITC	International Trade Center
MAP	Medicinal and Aromatic Plants
MEM	Market Entry Modes
MNC	Multinational Companies
NWFR	Non-Wood Forest Products
PA	Pyrrolizidine Alkoloid
TSI	Turkey Statistical Institute
UK	United Kingdom
US	United States

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INTRODUCTION

The use of medicinal aromatic plants (MAPs) dates to ancient times. These medicinal plants have been used by humans for therapeutic and other purposes. In addition, essential oils obtained from these medicinal plants have been used with the physical and emotional treatment method called aromatherapy. According to the World Health Organization (WHO), in most developing countries such as Asia, Africa and Latin America, about 80% of the population still relies on traditional herbal medicines for their primary medical requirements (Karık & Tunçtürk, 2019; Parvin et. al., 2023). It is estimated that there are 320,000 plant species used as food sources in the world. 25.000 are used for medical treatment, 5.000 for industrial purposes, 15.000 as ornamental plants and other species for various other purposes (Parvin et. al., 2023). The richest region in the world in terms of spice species is the northern part of South America and the Indonesian archipelago (Parvin et. al., 2023).

According to the WHO data, approximately 20,000 plants are used for medicinal purposes (Temel, et al., 2018). With its geographical structure and rich flora, there are 3 thousand 649 endemic plant species in Turkey and approximately 1000 of these plants are used for medicinal and aromatic purposes in Turkey and around the world (Keskin, 2022). Herbal products have few side effects unlike synthetic drugs. These products are safe and healthy for consumers. This situation increases the market share of the sector (Temel, et al., 2018).

Besides that, Turkey is among the most important countries in the world in the trade of medicinal plants and essential oils. When we look at the plants that our country is superior in production and export; thyme, laurel, poppy, and anise are seen (Bayraktar et.al., 2017). Additionally, for oil, thyme, lavender, anise, fennel, and sage are important species used in essential oil production in our country (Hasdemir, 2021). An increase over the years in thyme, lavender, and sage used in essential oil production is seen (Hasdemir, 2021).

Medicinal and aromatic products are gaining global importance due to their health benefits. In many cases, it is preferred because it is safer and more cost-effective than synthetic drugs. The demand for these natural products is increasing due to the increasing interest and awareness of consumers (Karık & Tunçtürk, 2019). In recent years, especially after the Covid 19 pandemic, the interest and demand for natural products are significantly increasing. Therefore, rather than chemical drugs natural and herbal products use is preferred.

Interest in medicinal aromatic plants and essential oils is on the rise in national and international markets. Essential oils from aromatic plants are used to make medicines, perfumes, and spices. As a result, these two groups often interact and move in the same direction, especially in commercial experiments (Parvin et. al., 2023). When the world essential oil sector market is examined, the total export figure is 5,8 billion dollars. The export figure of Turkey to the whole world is 3,7 million dollars in 2021 (Trade Map, 2023). The main exporters countries in the essential oil market are India, the United States of America, France, China, Brazil, Indonesia, Germany, Netherlands, the United Kingdom, Spain, and Italy. Turkey ranks 25th in essential oil exports on the world market (Trade Map, 2023).

In the list of important producers of medicinal and aromatic plants, Turkey comes after China and India, the largest producing countries (Karık & Tunçtürk, 2019). Despite the cultivation of medicinal and aromatic plants in most European countries, production areas are quite narrow. Countries mostly export raw plant material of wild origin, but the benefit for this is relatively low (Lange, 2006). In many articles in the literature, besides the export of medicinal aromatic plants as raw drugs, the necessity of producing processed intermediates or end products has been emphasized. The export of these intermediate and final products should be encouraged, and necessary supports should be provided (Karık & Tunçtürk, 2019).

In a study involving several Mediterranean countries, research was carried out to analyze the MAPs sector. In this study, local know-how, the fact that the collection process allows production without additional costs, the increasing interest of consumers in alternative and natural medicine, high value-added products (essential oils, food supplements, etc.) and the establishment of an organized value chain were listed as strengths of the sector (Taghouti, et al., 2022). On the other hand, lack of information about harvesting, processing and sustainability, lack of customer awareness on quality products and lack of organized national–EU plan to promote MAPs mentioned as weaknesses in the sector (Taghouti, et al., 2022).

The focus of the research is to identify the factors influencing export performance and the challenges faced by exporting companies in the medicinal and aromatic plants (MAPs) and essential oils sector in Izmir. This study aims to analyze the key parameters that impact the export activities of these companies, including both driving forces and obstacles. By examining these factors, the research seeks to provide insights into the challenges encountered by exporters and the elements that contribute to their success in the international market.

In this research, a qualitative approach was employed to assess the export potential of businesses in the medicinal and aromatic plants (MAPs) and essential oils industry. Semi-structured interviews were carried out with key representatives from 13 exporting companies based in İzmir, allowing participants to share their perspectives on export practices, challenges, and market conditions. The information gathered from these interviews was analyzed through content analysis, a systematic method used to interpret textual data by uncovering themes, patterns, and trends (Krippendorff, 2013).

The primary objective of this research is to develop a comprehensive understanding of the export potential and market dynamics within the medicinal and aromatic plants (MAPs) and essential oils sector, offering valuable insights that help businesses gain and sustain competitive advantage globally. In this context, the research aims to uncover and analyze the following specific objectives, which will generate key insights contributing to both theoretical knowledge and practical managerial implications: to assess the current state and export performance of companies in İzmir's medicinal and aromatic plants (MAPs) and essential oils sector; to identify the core challenges faced by exporting companies and explore the underlying causes of these challenges from an international business perspective; and to deepen the understanding of İzmir's sectoral integration into global markets, identifying opportunities for exporters to expand their market reach.

CHAPTER ONE
INTERNATIONALIZATON

1.1. THE DEFINION OF INTERNATIONALIZATION

Although there are different definitions of internationalization in the literature, there is no general agreement on the definition of this concept. In general, researchers define internationalization as an outward movement in the international activities of an individual firm or a larger group (Welch & Luostarinen, 1988). The definition of internationalization is extended by Welch and Luostarinen (1988) as 'the process of increasing involvement in international activities'. This broader definition is more closely linked to international trade dynamics, both on the inward and outward sides of the internationalization process (Welch & Luostarinen, 1988).

Calof and Beamish (1995) argued that “internationalization can also take the form of de-investment” and they defined internationalization "the process of adapting firms' operations (strategy, structure, resources, etc.) to international environments. Internationalization, as a strategic process, encompasses the transformation of both perspectives and positions within a business firm. Consequently, internationalization plays a pivotal role in the continuous evolution of a firm's strategic process. The term 'strategy process' indicates the ongoing development and changes taking place in international firms, with internationalization bringing about shifts in perspectives and positions (Melin, 1992). Therefore, it is evident that internationalization serves as a significant factor in shaping the enduring strategic processes of firms (Melin, 1992)."

Internationalization distinguishes itself from other growth strategies in several key ways. Internationalization essentially involves the expansion of a company's products, services or resources beyond national borders and the effective entry into new international markets (Andersen O. , 1997). This strategic process starts with the selection of target countries where the company plans to carry out its internationalization activities. Once the country of entry has been identified, the next important step is to define the foreign market entry strategy. The international markets selection and the choice of entry mode are two crucial strategic dimensions closely associated with a firm's internationalization process (Andersen O. , 1997). Anderen

(1997) adopted the following definition based on these two dimensions and previous definions: "internationalization is the process of adapting the exchange transaction method to international markets".

To date, many different theories have been developed to describe the activities of companies in international markets. Theories have been developed from different perspectives by observing the activities of companies in the international arena (Axinn & Matthysens, 2002) such as the expansion of companies' export markets, increasing capital investments worldwide, and entry patterns into new markets.

1.2. INTERNATIONALIZATION THEORIES

The origin of internationalization theories, it becomes evident that most of these theories are grounded in industrial organization and economics (Axinn & Matthysens, 2002). Towards the end of the 20th century, a significant development took place as U.S. companies started to invest in European Union (EU) companies and EU companies-initiated exports to neighboring countries (Axinn & Matthysens, 2002).

In the literature, international theories are grouped under three paradigms: the imperfection paradigm, the behavioral paradigm and the market failure paradigm. (Andersen, et.al., 2014). The resource-based view and contingency theory are other approaches to explaining companies' internationalization activities (Andersen, et.al., 2014).

Market imperfection paradigm comes from the theory of industrial organization (IO) theory introduced by Brain (1956). IO Theory suggested that industries operating in imperfect markets with few competitors and high barriers to entry are expected to deliver higher returns (Sharma & Erramilli, 2004). There are two theories under the market imperfections paradigm: Monopolistic Advantage Theory and International Product Life Cycle Theory (Andersen, et.al., 2014).

1.2.1. Monopolistic Advantage Theory

Hymer (1960) suggested that firms with firm-specific valuable assets have compensate the high costs of investing and operating abroad. He argued that in an imperfect product market environment, companies with a competitive advantage will choose to participate in foreign direct investment (FDI) (Andersen, et.al., 2014).

According to the theory, when the level of market imperfections is high, firms tend to prefer Foreign Direct Investment (FDI) is chosen when entering a new market, whereas when market imperfections are less, licensing becomes the primary choice (Sharma & Erramilli, 2004). In addition, the ease of entry to the target country plays a role in determining the direction of FDI (Andersan, et. al., 2014).

Hymer (1960) argued that the structural market imperfections are significant factors which allows the company to use of firm's advantages (Andersen, et.al., 2014). The structural market imperfections such as economies of scale, knowledge advantages, and diversification (Andersan, et. al., 2014) give significant monopolistic power in foreign markets. Firms must incur additional costs when entering a new country, including the cost of learning about cultural, political, and economic differences, the attitudes of customers, suppliers etc (Andersan, et. al., 2014). Of course, local competitors have an advantage, but in order to overcome these costs, companies need to use their resources and adopt local institutional environments (Andersan et al., 2014).

1.2.2. International Product Life Cycle Theory

Vermon (1966) explains internationalization process with product-life-cycle theory. According to the product life cycle theory, there are four stages: introduction, growth, maturity, and decline stages. Theory suggest that production cost levels differ between countries and firms choose exports as an entry method at the early stage, and later choose foreign direct investment (Sharma & Erramilli, 2004; Reiner et al., 2008). During the introduction phase, where customers are introduced to the new product for the first time, the product is produced domestically in low quantities and without standardization(Reiner et. al., 2008). In this stage, which companies focus on marketing campaign, communication, and informing the consumer about the product and its benefits, costs are not prioritize (Kopp, 2023; Andersen et. al., 2014) The companies meet the demand in foreign markets through exports (Sharma & Erramilli, 2004).

When demand increases, the product moves into the growth phase (Reiner, Demeter, Poiger ve Jenei, 2008). At this point, the product has become successful and recognized in the market at the same time, production number is increasing, standardization is increasing, and cost gains importance. In the maturity stage, competitors start to produce cheaper substitute products due to the high-profit potential of the product (Sharma & Erramilli, 2004). To maintain and strengthen its position in the market against this threat, the company started to carry out its production activities in the host country (Sharma & Erramilli, 2004). Lastly, in the decline stage, due to domestic alternatives and the market being saturated, product sales are decreasing, and companies are losing market share (Kopp, 2023).

1.2.3. The Behavioral Paradigm

According to behavioral theory, internationalization is a learning process and the firm's knowledge of the market increases day by day because of the cost of information acquisition and managers have bounden rationality (Andersen et.al., 2014; Sharma & Erramilli, 2004). When entering an imperfect market, the firm tends to seek short-term benefits and avoid risks. According to Sharma and Erramilli (2004), investments in the market are gradually increasing and companies avoid inter-firm relationships due to requirement of high resource commitment in the long term (Andersen et.al., 2014). Under this paradigm, the Internationalization Theory was introduced by Johanson and Wiedersheim-Paul (1975).

1.2.4. Internationalization Theory

Johanson and Wiedersheim-Paul (1975) assumed that initially companies are established and developed in their home countries, and then companies expand their activities through cross-border operations. Johanson and Wiedersheim-Paul (1975) noted that the most significant obstacle faced by companies in internationalization activities is the lack of information and resources. Therefore, when companies decide to operate in foreign markets, they initially enter neighboring countries' markets and those where they have relatively more knowledge about the way of doing business (Johanson & Wiedersheim-Paul, 1975).

In this theory, it is argued that internationalization is a gradual process in which operations are expanded step by step. Johanson and Wiedersheim-Paul (1975) called this process as establishment chain that includes four stages; no regular export activities, export via independent representatives (agent), sales subsidiary and production/manufacturing. In this process, the company begins operations in the foreign market through indirect exports, then direct exports through host country intermediaries, and finally exports through wholly owned subsidiaries (Sharma & Erramilli, 2004; Johanson & Wiedersheim-Paul, 1975). In other words, thanks to this chain of establishment, the resource commitment of companies increases, also leads to the creation of significantly different market experiences and knowledge (Johanson & Wiedersheim-Paul, 1975).

1.2.5. Market Failure Paradigm

The market failure paradigm developed from the theory of firms introduced by Coase (1937). The theory suggests that firms choose markets and hierarchies, which are alternative ways of performing an economic function, by considering their relative efficiency. According to this theory, in perfect competition, exporting and licensing are more appropriate as a form of market entry; if the market fails, it is better to internalize its activities. (Sharma & Erramilli, 2004; Andersen et.al., 2014). Internalization, Eclectic, and Transaction Cost theories support and explain this paradigm.

1.2.5.1. Internalization Theory

Internalization theory is launced Buckley & Casson (1976) focus on multinational companies (MNC) internationalization activities. The theory suggested that MNC establish subsidiaries or engage in foreign direct investment when entering new markets rather than relying on foreign markets and market dynamics. Buckley and Casson (1998) emphasized the strategic importance of licensing in market entry with market-based and firm-based solutions.

According to the theory, multinational companies grow by internalizing foreign markets for intermediate product (Sharma & Erramilli, 2004), mainly the flow of knowledge, the flow of linking research and development to production, and the flow of components and raw materials (Casson, 2015). The theory is based on risks and benefits, and firms internalize when the benefits outweigh the costs (Casson, 2015; Andersen, et.al., 2014).

1.2.5.2. Electic Theory

Dunning (1980) explains the selective framework based on Ownership Advantage, Locational Advantage, and Internalization Advantage (Sharma & Erramilli, 2004). According to the theory, companies decide on the way to enter the market based on these factors. Ownership Advantage is defined as unique and sustainable firm-specific assets and skills (Andersen, et.al., 2014). The size of the company and multinational experience reflect its assets and the firm capabilities and ability to develop new products reflect its skills (Andersen O. , 1997).

Location advantage determines the attractiveness of the country in terms of market potential and investment risks (Andersen O. , 1997). Factors such as culture, existence of market infrastructure, production costs, entry barriers and risks exposed affect the location advantage of companies (Andersen O. , 1997; Andersen, et. al., 2014). Lastly, internalization advantages related with the cost of choosing hierarchical model of the operation (Andersen O. , 1997). According to this approach, companies need to compare the benefits of performing activities through the market or in-house in terms of coordination and transaction costs. (Andersen et.al., 2014; Sridharan, 2023).

Dunning (1980) summarize the electic theory as: There are three ways for an enterprise operating in the local market to grow: focusing on new product groups and new activities, acquiring existing businesses, or expanding into foreign markets. If the business chooses the last option, it will start operating in the foreign market and will need to be able to operate and produce in the foreign market where local companies are strong (Dunning, 1980).

1.2.5.3. Transaction Cost Theory

Transaction cost theory explains why companies’ choice the least costly method while entering the new market (Brouthers, et.al., 2003). According to Brouthers (2002), transaction costs consist of the costs of finding and negotiating with a suitable partner and the costs of monitoring the partner firm's performance. Anderson and Gatighon (1986) suggested firms decide to carry out its production activities in the foreign market instead of licensing or contracting with local companies (Andersen et.al., 2014).

In the literature, theory suggests that firms prefer market-based modes due to economies of scale in the market, and if it is easy to find and negotiate with a potential partner, firms tend to rely on the market to meet market requirements (Brouthers, 2002). However, companies may face high costs when finding partners, and in this case, they tend to use fully owned modes (Brouthers, 2002).

1.3. MARKET ENTRY MODES

In the literature various scholars has studies about market entry modes (MEM). The method firms choose to enter new markets is defined as one of the important factors in their success or failure (Schellenberg et.al., 2017). While determining MEM, researchers have used different classification, different criteria, and variables such as level of control, resource commitments, the level of risks and expected returns (Schellenberg et.al., 2017; Garg, 2014). Kumar and Subramaniam (1997) classified MEM modes equity and non-equity modes depend on commitment of resources. Joint The equity modes, such as ventures, acquisitions, and greenfield investments, require a significantly higher commitment of resources. Exporting and contractual agreements, which involve lower resource commitments, are classified as non-equity modes (Kumar & Subramanian, 1997).

Joint Venture is a business agreement that two or more parties agree to pool their resources, assets, knowledge for a specific tasks or business activity. All parties have control and responsibilities over the results, profit, loss. Greenfield Investments, a type of foreign direct investment, is an investment made with physical facilities such as commercial offices, production facilities, distribution facilities in a foreign country (Garg, 2014; Kumar & Subramanian, 1997). In acquisitions mode, one company gain control over another company by purchasing a stock. In this way, the company will enter the foreign market faster than Greenfield Investments and take less risk (Garg, 2014).

Export is the process of transferring goods and services to foreign markets. In this way, without a large investment, the company begins operating in the foreign market (Chung & Enderwick, 2001). Anderson and Gatignon (1986) classified market entry modes based on four characteristics: risk, return on investment and and degree of control characteristic (Kumar & Subramanian, 1997). For a company new to the market, exporting may be preferred because it has low resource commitment and low risks. (Schellenberg et.al., 2017; Kumar & Subramanian, 1997). There are two types of exporting:

1) Indirect exporting includes domestic intermediaries such as export trading and management companies or distributor who takes on risks and responsibilities such as shipping, marketing, paperwork. There is no need to experience about internationalization activities (Osland et.al., 2001).

2) In direct exporting concept, companies entering foreign market without domestic intermediaries, transferring goods and services directly to the customers.

International markets are changing and developing rapidly, exports play an important role in the development, development, and growth of companies (Chen et al., 2016). Additionaly, previous research has suggested that exports can improve organizational capabilities, resulting in additional resources that increase firms' performance (Filatotchev el al., 2009). Therefore, a solid understanding of exports is highly demanded by researchers, managers and policy makers (Chen et al., 2016).

When exporting, companies need to learn specific information about the process of identifying and serving foreign customers that cannot be provided through the companies' general experience and ownership. These knowledge can be listed as working experience with multinational enterprises, involvement in the internationalization strategy of local firms (Filatotchev el al., 2009). Exporting is a cost-effective way to enter a new market and provides a high level of flexibility, so it is the most used option when entering a new market. As a result, more importance has started to be given to the company's export performance in recent days (Sousa et al., 2008).

1.4. EXTERNAL AND INTERNAL FACTORS AFFECTING EXPORT PERFORMANCE

Understanding the key points and determinants of export performance is crucial for the growth and survival of companies. Additionally increasing global trade activities and competition have caused understanding of the determinants of export performance has become important for recent business world and researchers (Sousa et al., 2008). While classifying export performance as internal and external factors, resource-based theory and contingency theory are taken as basis. The resource-based paradigm identifies internal factors of export performance (Sousa et al., 2008).

1.4.1. External Factors Affecting Export Performance

Zou and Stan (1998) classified the external factors affecting export performance as industry characteristics, foreign market characteristics and domestic market characteristics. Industry’s technological intensity, industry level of instability, industry adaptation, industry concentration are other factors affecting export performance externally. Although there is not enough research, it is suggested that technology-intensive industries and firms with high complexity have better export performance (Chen et al., 2016; Zou & Stan, 1998).

The foreign market contains threats, uncertainties and, in a sense, opportunities for companies. *Legal and political factors and cultural similarities* are the most frequently mentioned determinants in the literature and *market* competitiveness, market attractiveness, economic environment and customer exposure are other determinanats affecting the export performance (Sousa et al., 2008).

Chen et al. (2016) found that *domestic demand, export assistance, local market characteristics, infrastructure quality, legal quality and institutional environment* factors are influecing export performence. Additionally, Sousa et al. (2008) stated that *environmental hostility* is another determinant and that although domestic market characteristics are important in determining export performance, there is not enough research in the literature.

1.4.2. Internal Factors Affecting Export Performance

According to the resource-based theory, strategic resources such as *valuable, rare, difficult to imitate and non-substitutable* are provide sustained competitive advantage to firms (Edwards et al., 2014). Based on this view, the theory supports that superior performance will occur if the firm acquires and uses unique resources. Therefore, resource-based theory reflects that firm-level factors such as firm size, international experience, capabilities, and competencies affect explaining the export performance of firms (Sousa et al., 2008).

In the literature, internal export performance factors classified as export marketing strategy, firm characteristics/capabilities, management characteristic, management attitudes and perceptions (Zou & Stan, 1998). According to the reseacrhs, marketing mix variables (product, price, promotion, distribution) are most frequenlty used determinants unde the export marketing strategy (Sousa et al., 2008). After these factors, firm basic characteristics such as firm’s size, firm’s international competence, market orientation, firm’s capabilities/competencies, firm’s technology are widely considered (Zou & Stan, 1998; Sousa et al., 2008). Recent studies shows that the positive effect of outsourcing on export performance is strengthened by a company's export experience (Chen et al., 2016). Additinaly, Sousa et al. (2008) explained that market orientation is one of the key determinants of export performance, providing an integrated perspective by assessing an organization's ability to anticipate, respond to and benefit from changes in its environment.

In addition, managerial characteristics *(export commitment and support, international orientation, international experience, education)* are important in determining the export performance of firms. Management attitudes and perceptions are frequently mentioned in the literature as an important factor on export performance, especially, management's export commitment is one of the main determinants of export performance. Additionally, high management commitment ensures that opportunities in the export market are pursued and then export performance is increased through effective export marketing strategies (Zou & Stan, 1998). Additionally, some studies show that managers' international experience and education level affect export performance, export sales, growth and profits of firms (Chen et al., 2016; Zou & Stan, 1998).

1.4.2. Firm Capabilities

Gupta & Chauhan (2021) mentioned that internationalizaton is a process of adapting firms operations (strategy, resources, structure, capabilities, etc.) to internationalize environment. At this point, the resource-based theory, which is a major dimension in measuring firms' performence, (Durmaz & Eren, 2018) reflects that competitive advantage derives from a firm's capabilities and resources. Research in the literature shows that companies' resources and capabilities such as knowledge, product, technology, experience, personnel, logistics and promotion have a remarkable impact on export performance (Durmaz & Eren, 2018). Additionally, effective management of the firm's capabilities in *networking, innovation and marketin*g is crucial in international markets (Gupta & Chauhan, 2021).

In the literature, innovation cabalities focus on innovation in product development and research and development (R&D) efforts. Marketing capabilities (firm's capacity to adapt product, service, and price of the target market) reflect the firm's abilities to use skills, resources, and collective knowledge to meet market needs. In fact, employee knowledge, know-how and experience identified as the most important contributors to business success and export marketing capabilities (Hall, 1993; Durmaz & Eren, 2018).

The networking approach suggests that firms' competence can be achieved through the effective use of networking capabilities. At this point, organizational networking, which is related to human relations, is important in terms of creating an organizational network based on commercial relations and organizational structure

(Hall, 1993). However, to achieve high export performance, it is more important to use these resources appropriately rather than having resources (Gupta & Chauhan, 2021).

Looking at previous studies on export performance in the literature, there are a large number of researchers in different industries and countries including Turkey. I classified some studies conducted between 1998 and 2015 in the literature (See Table 1). Studies were completed with personal interviews and hand-collected data sets, but the majority were completed by mail. This means that it is difficult to reach companies physically. Additionally, most studies used multisector sampling to increase the observed variance and strengthen the generalizability of the results (Morgan et al., 2004). Key determinants of export performance can be listed as firm firms size, firm competence, firm characteristics, customer orientation, marketing mix adopatation, export commitment, export intensity, geographical location, innovation capabilities (Hoang, 1998; Aulakh et al., 2000; Dean et al., 2000; Zou & Stan, 1998; Akyol & Akehurst, 2003; Filatotchev et al., 2008; Navarro et al., 2010; Yi et al., 2013; Agnihotri & Bhattacharya, 2015; Zehir et al., 2015).

Table 1: Previous Studies of The Export Performance

Authors	**Country of study**	**Industrial Sector**	**Determinants**
Hoang (1998)	New Zealand	Multiple Industries (manufacturing export firms)	Export intensity, export intensity growth, product strategy, promotion strategy, market expansion
Aulakh et al. (2000)	Brazil, Chile & Mexico	Manufactured durables, Manufactured nundurables, services, food/agricultural products	Cost leadership, product differentiation, marketing standardization, export diversification
Dean et al. (2000)	Australia	Manufacturing firms	External factors (environment) and internal factors (firm competencies, firm characteristics, and strategy)
Zhao and Zou (2002)	China	Mining and proccessing, timber and paper pulp, textile and apparel, food and beverage, power supply, chemical and petroleum, smelt and metal produts,	Industry concentration, firm location

		machinery and transport, electric and electronic, building materials	
Akyol and Akehurs (2003)	Turkey	Clothing Industry	Export market orientation
Filatotchev et al. (2009)	Poland, Hungary, Slovenia, Slovakia and Estonia	Electrical and optical equipment industry, metals and metal products, food, beverages and tobacco, non-metal mineral products, chemicals and man-made fibers, rubber and plastic products, clothing and textiles	Product development, foreign partners, unrelated acquisitions
Navarro et al. (2009)	Spain	Equipment industry, automative industry, food industry	Competitive advantages Adaptation the marketing mix Export commitment
Lengler et al. (2013)	Brazil	Machinery, furniture, agricultural products, garments/textile, shoes, food/beverage, automotive (parts/accessories), communication products, chemicals/hygiene products, leather goods	Customer orientation, competitor orientation, external technology acquisition
Yi et al. (2013)	China	Food, beverage, tobacco, textile, clothing, electric equipment and machinery, Telecommunications, computer and other electronic equipment medical and pharmaceutical products, etc.	Export intensity, innovation capabilities
Nosouzi et al. (2013)	Iran	Medical plants' producers and exporters	Environmental factors, export supportive issues, potentials for export, business plan, export plan, structural barriers, competition capability and strategy
Agnihotri and Bhattacharya (2015)	India	Rapidly changing consumer goods, automobiles, pharmaceuticals, and textiles.	Top management characteristics (educational level, functional heterogeneity, international exposure, age, and length of tenure)

Zehir et al. (2015)	Turkey	Manufacturing sector	Market orientation, innovation capability
Karim et al. (2020)	Iran	Herbal exporting companies	Marketing strategies (target markets, adoption of appropriate marketing and non-marketing strategies, prioritization of target markets, and government and private partnerships)

Source: Created by the author, 2023

1.4.3.1. The Scarcity of Medicinal and Aromatic Plants and Essential Oil Industry

In recent years, interest in the use of medicinal and aromatic plants and essential oils has been increasing. Due to the increasing awareness of consumers, the demand for these natural products is also increasing (Karık and Tunçtürk, 2019). Especially after the Covid 19 epidemic, the interest and demand for natural products is increasing significantly. Since these plants are safer and more cost-effective than synthetic drugs, the use of natural and herbal products is preferred instead of chemical drugs.

In the literature, there are limited research explaining export performance of MAPs exporting companies. There are two reserachers in Iran which explains determinants of export performence in MAPs industry. Nosouzi et. al. (2013) determined eight factors: environmental issues, export supportive issues, potentials for export, business plan, export plan, structural barriers, competition capability and strategy. Based on this reseach, under the business plan related factors, weak technology is the number one which is influencing MAPs exporting in Iran. It is followed by poor investment, poor advertisement and insufficient production.

Additionaly, according to export plan related factors, lack of access to an specialist for marketing planning is the most influenced factors under the export plan. Poor marketing planning and studies, poor advertisement and inappropriate image from the country of destination are other factors influencing exporting of MAPs in Iran. Weak transportation, lack of knowledge on world's needs, insufficient coordination between different ministries and uncertainty on currency are other factors. Strategy related factors, lack of a reliable dealer, poor packaging, government policy and embargo and political sanction are also mentioned in this research (Nosouzi, Azad, & Naami, 2013). These determinants may guide future studies that investigating export performance of MAPs.

Karim et. al. (2020) also investigates role of marketing strategy on export of MAPs industry in Iran. They found that differentiation strategies, market development and product development have positive and significant impact on export performance. Additional, export pattern of MAPs are classified as prioritize export market, persistence in target markets, proper export strategy, and government and private sector. These four determinants are very important to increase and improve export performance (Karim et al., 2020).

In general, there is a lack of studies on the export performance of MAP sectors in the literature and in the Turkish market. Identifying and analyzing this sector and main export determinants will benefit both the sector and the literature. Future studies in the MAP sector will guide companies in the sector to increase their export performance.

CHAPTER TWO
INDUSTRY ANALYSIS

2.1. MEDICINAL AND AROMATIC PLANTS AND ESSENTIAL OIL INDUSTRY WORLDWIDE

Medicinal and aromatic plants (MAPs) have been used as an important resource in many different sectors, including health and perfumery, since ancient times. Recent studies indicate that there is a broad scope for institutional development in these natural resources. It is stated that MAPs historical and cultural background and reliability can make them in high demand while shaping initiatives in biodiversity. The rich information available about MAPs is an important source of strength for those considering starting a business in this field (Kala, 2015). Many regions in the Mediterranean are rich in spices, including the Alps and Pyrenees, France, Greece, and the Central in North Africa. As the cultural heritage of the Mediterranean region, MAPs represent an important raw material for various industrial sectors in many fields (Taghouti, et al., The Market Evolution of Medicinal and Aromatic Plants: A Global Supply Chain Analysis and an Application of the Delphi Method in the Mediterranean Area, 2022).

Research shows that there has been an increasing social and political interest in the production and commercialization of Non-Wood Forest Products in recent years. MAPs are key NWFPs in the Mediterranean region. It contributes in many ways to the economic well-being and development of the community in the region. These products play an important role in rural employment as well as being important elements for economic development (Taghouti, et al., The Market Evolution of Medicinal and Aromatic Plants: A Global Supply Chain Analysis and an Application of the Delphi Method in the Mediterranean Area, 2022).

A statement by the World Health Organization stated that most of the population in developing countries directly depend on MAPs for their basic health needs. In addition, the use of MAPs is increasing in developed countries. For example, over 25% of the population in the UK and over 90% in Germany regularly consume herbal medicines (Taghouti, et al., The Market Evolution of Medicinal and Aromatic

Plants: A Global Supply Chain Analysis and an Application of the Delphi Method in the Mediterranean Area, 2022).

The most traded MAPs in the world are coffee, sesame, garlic, red pepper, allspice, black pepper, green tea, mustard seeds, poppy seeds, ginger, salep and cumin (Keykubat, 2016). MAPs have recently expanded into new areas such as phytotherapy, veterinary medical, uses, aromatherapy, cosmeceuticals, and animal welfare use. As a result, they have become industrial products. MAPs are used in many different areas, including functional foods, livestock, and crop protection in agriculture. Recently, it is seen that there are new, innovative, and value-added applications with these new usage areas (Máthé, 2014).

In many countries, the processing of plant extracts using plant raw materials from wild collection, cultivation, horticulture, and forestry has slowed the global commercialization of value-added ingredients. The market development of MAPs is subject to continual changes in the regulatory framework and market drivers. It is observed that the demand for plants collected from nature has increased. However, due to the wrong harvest and not considering the product standards, a situation that poses a risk to nature and people occurs. In addition, there is a lack of knowledge in practices such as agriculture and harvesting around the world. This problem also causes a shortage of raw plant material with added value and suitable for trade (Dürbeck & Hüttenhofer, 2015).

MAPs are used as components of cosmetics, medical products, and healthy products. Essential oils also contain processed natural ingredients with added value such as dry and liquid extracts and oleoresins. Essential oils obtained from aromatic plants, generally by distillation, are widely used in cosmetics and perfumery (Tokat İli Tıbbi ve Aromatik Bitkilerden Uçucu Yağ Üretim Tesisi Ön Fizibilite Raporu, 2021).

The demand for essential oils is increasing due to owing to their varied functions and applications. The value of the global essential oil market in 2022 was recorded as 21.79 billion USD. The estimated figure for 2030 is 40.12 billion USD. The data is actually an indication that the essential oil industry continues to grow and has great potential (Grand View Search, 2023).

In the essential oil sector, the Asia Pacific market accounted for the largest share in 2021. The reasons for the increase in demand in the region are based on factors such as the increase in the demand for aromatherapy, the increase in the demand for functional food products and the increased awareness of healthy food products among consumers. Studies have shown that for the future of the essential oil market, consistent increase in commercial demand for essential oils in food & beverages, cosmetics, toiletries, homecare, health care, and aromatherapy sectors (Markets and Markets, 2022).

In North America, the expanding aromatherapy market in recent years has had a positive impact on essential oil demands. Increasing cosmetics production in Europe is driving the essential oil market. In Asia Pacific, the growing healthcare industry is the main driver of using natural ingredients in medicines, so the demand for essential oils is increasing (Global Market Insights, 2023).

Industry constraints are depletion of natural resources and side effects associated with specific essential oils. (Markets and Markets, 2022). Unsustainable harvesting practices of these valuable plants pose a threat to the sustainability of the world's bio-resources (Sharma & Kala, 2022).

The food and beverage industry are the largest market segment where essential oils are used. Researchers and food processors are addressing the application of essential oils in processed food products as they control food spoilage and microorganisms. Producers often prefer essential oils to replace synthetic ingredients in final products for their color, flavor and fragrance. As consumers in the market become conscious and awareness of their health benefits, there is an increase in the food and beverages that use essential oils. Orange, lemon, thyme, clove, rosemary, and coriander oils are seen as the most used essential oil in the food and beverage industry (Saeed, et al., 2022)

Although essential oils are generally used as fragrances, they are used in cosmetics, perfumery, food and beverage, cleaning products, homecare, healthcare, and skin care. Skin care is the most important product category because many products have natural ingredients. In addition, lemon and orange essential oils have antiseptic properties. Relatively high-priced essential oils are used in the perfume and personal care industry. The demand for essential oils in the market is largely driven by the fragrance, cosmetics, and aromatherapy sectors (Markets and Markets, 2022).

Looking at the essential oils produced in the world, orange oil, lemon oil, peppermint oil, geranium oil, clover leaf oil, eucalyptus oil, jasmine oil, rosemary oil, tea tree oil, lavender oil, rose oil, coriander oil, other types (sandalwood, cedar), chamomile, sage, saffron, grape seed, anise, ginger, thyme, cinnamon, ylang ylang, and basil oils).

2.1.1. Major Competitors Worldwide

Looking at the leading countries in the MAPs sector, France, Bulgaria, Romania, and Poland are some major productive countries in the EU. MAPs are traditionally grown in these countries. France ranks first in the European harvest of pharmaceutical MAPs and produced MAPs are traditionally refer to, culinary herbs, medicinal plants, and plants cultivated for the fragrance and perfume industries. In France, several hundred plant species are cultivated includes field crops, such as cereals, single species grains. The country places great emphasis on organic production, which is significantly more prevalent than traditional methods (Bergoënd & Piasentin, 2020). As a result, France emerges as a highly promising market for MAPs, particularly organic products (European Medicinal and Aromatic Plant (MAP) Farming, Processing and Training Alliance, 2020).

In Bulgaria, coriander, lavender, fennel, rose are among the plants where production is intense. This MAPs production is carried out on a total area of 83,199 hectares. Rose and lavender play a significant role in the cosmetics and perfume market, while coriander and fennel are exported as MAPs. Additionally, melissa, mint and sage are other MAPs cultivated in Bulgaria (European Medicinal and Aromatic Plant (MAP) Farming, Processing and Training Alliance, 2020).

The main essential oil producers in the world are Brazil, China, India, Indonesia, Sri Lanka, Vietnam, North America, France etc. For example; orange derivatives are produced in Brazil and China, lemons in Argentina and Spain, eucalyptus in China and India, mint in the US and India, lavender in France and Spain, patchouli in Indonesia and China (Barbieri & Borsotto, 2018).

2.1.1.1. Export Volume Worldwide

MAPs are divided into different groups in the harmonized system included in the ITC statistics in foreign trade. These product groups are 0910 (Ginger, saffron, turmeric, curcuma, thyme, bay leaves, curry and other spices), 0909 (Seeds of anis, badian, fennel, coriander, cumin or caraway; juniper berries) 1211 (Plants and parts of plants, incl. seeds and fruits, of a kind used primarily in perfumery) (Trade Map, 2023).

2022 TradeMap data for MAPs classified by Hs Code: 0910 still not fully published. When the data are examined, China, India and the Netherlands are seen as the leading countries in the export of plants with the Hs Code:0910 *(See Table 2).* Looking at the data for 2021, a total of 3,510,341 thousand dollars of MAPs coded (Hs Code: 0910) was exported around the world. Additionally, in 2020 total MAPs (Hs Code: 0910) exports in the world increased by 21.53% in the compared to 2019. China ranks first with exports of 760,800 thousand dollars. In 2022, China is the leader country and exported MAPs (HS Code:0910) for 425,041 thousand dollars. Compared to 2021, it is seen that there is a decrease of 44.15% in export figures.

In the same years, India and the Netherlands increased their MAPs (HS Code:0910) exports. In addition to these countries, Iran, Germany, Turkey and Spain are among the countries that export MAPs (HS Code:0910). Turkey ranks 7th in 2022 with an export of 126,774 thousand dollars (Trade Map, 2023).

Table 2: World Export Numbers (HS CODE: 0910 Ginger, saffron, turmeric, curcuma, thyme, bay leaves, curry and other spices) Unit: US Dollar thousand

Exporters	Exported value in 2018	Exported value in 2019	Exported value in 2020	Exported value in 2021	Exported value in 2022
World	2869374	2952375	3587567	3510341	
China	527274	703238	928457	760800	425041
India	419036	398311	534605	577319	
Netherlands	237564	231293	276009	288789	258500
Iran	353703	298620	193305	156686	
Germany	123350	122295	142382	155888	109611
Türkiye	113700	118415	136087	139949	126774
Spain	103793	98304	119942	119358	119961

Pakistan	73694	74164	82079	93976	
Peru	45145	44567	112019	92827	69083
United Arab Emirates	50609	58985	88559	85707	
Thailand	97812	69833	73764	67496	72341
South Africa	65909	60924	57170	67447	67641
United States of America	45160	46909	61568	66541	69703

Source: Trade Map, 2023

The other category classified with 0909 Hs Code includes seeds of anise, badian, fennel, coriander, cumin and juniper berries. The data for 2021 shows that there is an export of 1,397,366 dollars worldwide in this category *(See Table 3)*. India and China are also in the top 3 in export figures in this category. For 2021, India realized 611,306 thousand dollars of exports in the first place and Vietnam 112,133 thousand dollars in the second place. China ranks 3rd with exports of 111,884 thousand dollars in 2021. However, in 2022, it decreased to 86,684 thousand dollars with a decrease of 22.53%. These countries are followed by Saudi Arabia, Turkey, Afghanistan, Russia, Germany, Egypt and Italy. Turkey is in the 6th place in this category (Hs Code: 0909), showing that it is at an important point in MAPs exports. According to 2022 data, MAPs (Hs Code: 0909) exports amounted to 38,162 thousand dollars in Turkey (Trade Map, 2023).

Table 3: World Export Numbers (HS CODE: 0909 Seeds of anis, badian, fennel, coriander, cumin or caraway; juniper berries) Unit: US Dollar thousand

Exporters	Exported value in 2018	Exported value in 2019	Exported value in 2020	Exported value in 2021	Exported value in 2022
World	1001101	1103599	1278671	1397366	
India	522664	563546	633182	611306	
Vietnam	26667	46624	46327	112133	
China	50807	49108	63476	111884	86684
Syria	74194	72255	73323	51743	
Türkiye	31994	39357	47791	46709	38162
Afghanistan	21694	29356	39780	43877	

Russian Federation	17730	19673	23122	36891	
Germany	23583	23257	30596	36828	31948
Egypt	27462	32289	32445	34267	
Italy	19095	21546	26717	30972	30765
United Arab Emirates	20128	25274	28543	29791	
Iran, Islamic Republic of	19702	26441	46428	25832	
Spain	19032	18448	22260	24075	21227

Source: Trade Map, 2023

Looking at the data of the last product group numbered 1211, in 2021, a total of 3,921,929 thousand dollars of exports were realized in the world *(See Table 4)*. When looking at the top 3 exporting countries, there is Germany after to China and India. With an export of 949,966 thousand dollars, China constitutes the majority of the market. Indian export figures have been increasing for years. In 2021, exports amounted to 414,627 thousand dollars. In 2021, Germany ranks 3rd with 237,521 thousand dollars. In addition to these countries, US, Egypt, Canada, Spain, Poland and Korea HS Code:1211 Plants and parts of plants, incl. is among the top 10 exporting companies in the category of seeds and fruits, of a kind used primarily in perfumery (Trade Map, 2023).

Table 4: World Export Numbers (HS Code:1211 Plants and parts of plants, incl. seeds and fruits, of a kind used primarily in perfumery) Unit: US Dollar thousand

Exporters	**Exported value in 2018**	**Exported value in 2019**	**Exported value in 2020**	**Exported value in 2021**	**Exported value in 2022**
World	3218155	3237661	3587643	3921929	
China	822422	898270	931661	949966	971020
India	307883	285797	347387	414627	
Germany	190892	187121	217270	237521	217668
United States of America	184139	173354	177211	173515	165118
Egypt	111340	118095	138225	170203	
Canada	131854	120713	141646	161360	183838

Spain	87364	100969	103811	108217	103733
Poland	84050	87680	96909	103682	112816
Korea, Republic of	84913	87237	75817	88821	97439
Mexico	80174	67155	77741	71941	
Viet Nam	23712	20193	46862	71525	
France	56163	51853	61444	69627	66690
Morocco	62407	63933	54651	68027	65112

Source: Trade Map, 2023

When we look at the main exporting countries in the essential oil sector, USA takes first place with 707,884 thousand dollars in 2022 *(See table 5)*. While India follows the USA with 696,388 thousand dollars, France takes the third place with 438,444 thousand dollars. In 2022, Europe dominated the global essential oils market with the share of 43.3%. One of the main factors driving the growth of this sector in Europe is the presence and support of organizations such as the European Essential Oils Federation (EFEO). EFEO works to support and protect the interests of stakeholders in the industry. They are in talks with the European Commission, together with the EU Parliament, for developments in the legislation on essential oils. In addition, the easy supply of raw materials in the region and the presence of various industry players are among the factors affecting the region's dominance in the market share (Grand View Search, 2023).

In the 2022 export data of essential oils, European countries such as France, Germany, England, Italy, Spain, Netherlands, Bulgaria, Austria and Switzerland dominate. Türkiye ranked 23rd and exported 44,419 thousand dollars. The Asia-Pacific region, specifically India, China, and Indonesia, stands as a pioneering force in the essential oil industry. These countries have emerged as significant players, showcasing their expertise and influence in the global market. They are the biggest exporter of some valuable essential oils in the world such as champagne extract, jasmine extract, lavander oil, incense oil, sandalwood. oil, seasoning oils. This region has favorable weather conditions for MAPs farming, as well as low labor costs and abundance of raw materials support the growth of production in this region (Grand View Search, 2023). China uses many MAPs in traditional Chinese medicine and is the source and production center of most of them. As in other parts of the world, MAPs in China are over-harvested to meet demand, with high demand for traditional medicines and herbal products. As a result, plants are under threat. Sustainable resource use is essential in order to prevent this situation and protect the species (International Trade Centre, 2016). In 2022, Asian Pacific countries have demonstrated their significant export capabilities. India holds the notable position of being the second-largest exporter, with a substantial export value of 696,388 thousand USD. China, on the other hand, ranks as the fifth largest exporter, with exports amounting to 322,472 thousand USD. and Indonesia, secures the tenth position among exporters, having achieved an export value of 172,873 thousand USD *(See Table 5)*. These export figures underscore the considerable contributions and competitiveness of these nations within the global essential oils market.

Table 5: List of exporters for essential oils (Hs Code: 3301 Essential oils, whether or not terpeneless) Unit: US Dollar thousand

Exporters	**Exported value in 2018**	**Exported value in 2019**	**Exported value in 2020**	**Exported value in 2021**	**Exported value in 2022**
World	5944571	5627479	5320372	6047482	5235281
United States of America	799983	788842	803523	864859	707884
India	861416	1212564	837765	975816	696388
France	522032	460229	478641	503069	438444
Brazil	437220	313938	270190	279001	420234
China	469176	349876	305141	349322	322472
Germany	228529	202358	209834	239174	246139
United Kingdom	244039	210808	207354	196611	197711
Italy	195026	182862	160917	181700	178532
Mexico	146258	112937	108019	127317	177963
Indonesia	199266	185328	215807	248401	172873
Spain	193681	174357	187271	180985	156547
Netherlands	80730	90418	156837	218620	153522
Argentina	243865	205349	194738	154282	153282
Bulgaria	119072	86925	95898	100007	90743
Madagascar	71137	60106	69811	76975	75212
Canada	80840	56778	61086	73303	70156

Australia	75313	63872	82575	89159	66088
Switzerland	57117	67120	66998	68033	59176
Egypt	51886	52691	59894	56374	55173
Austria	51139	43546	48706	60840	54555
South Africa	50921	44789	50962	52321	53585
Singapore	74900	66470	54250	52864	45387
Türkiye	47481	40065	37894	37917	44419

Source: Trade Map, 2023

2.1.2. MAPs and Essential Oil Industry in Turkey

Turkey has an advantageous position to produce medicinal and aromatic plants with its geographical location. Factors such as the climate, plant diversity, agricultural potential, and large surface area for MAPs production in Turkey make it an important player in the sector (Pakdemirli, et al., 2021). Turkey, with its geographical location, is a bridge between Southern Europe and Southwest Asian MAPs flora (Pakdemirli, et al., 2021).

There are 9,222 plant species and 3,649 endemic plant species in Turkey. 500 of them are used for medicinal and aromatic purposes. As a result of the research, although the exact number is not known, there is information that 200 plants have export potential. According to the data of the Turkish Ministry of Agriculture and Forestry, exports of 2,928,756.92 dollars were realized under the name of herbal and medicinal spice plants among the organic products that Turkey exports the most (T.C. Tarım ve Orman Bakanlığı, 2023).

In the studies, it was stated that the number of plant species collected from nature for commercial purposes and sold in the domestic and foreign markets is 347, and 35 of these species are endemic (Hasdemir, 2021). Turkey realizes 90% of world laurel trade and 70% of thyme trade. In addition, it is one of the leading countries in the export of rose oil, caper, and carob (Güngör et al., 2005)

Turkey exports MAPs to nearly 100 countries around the world, primarily the US, Germany, Vietnam, Netherlands, Poland, Brazil, Canada, Italy, Belgium, Greece, France and Japan. The most common MAPs exported by Turkey are fennel seeds, juniper bark, mahaleb, fenugreek, rosemary, licorice root, mint, sumac, sage and linden flowers, thyme, bay leaves, cumin and anise (European Medicinal and Aromatic Plant (MAP) Farming, Processing and Training Alliance, 2020).

As a result of the increasing awareness of natural and organic products, interest and demand for medicinal and aromatic plants are increasing in the world and in Turkey. This orientation of the consumers has shifted the producers from synthetic products to natural products and as a result, the demand for essential oil sector has increase (Bahuguna & Jandhyala, n.d.). The Covid-19 pandemic has a great impact on consumers' orientation towards different searches. During that period, alternative, natural healing methods were sought. With the natural origin of aromatherapy and essential oils, there has been an increase in demand for these products. As result of increasing demand, many plant species in this field are harvested from nature and traded in domestic and foreign markets.

As mentioned before, Turkey is a rich country in terms of MAPs due to its geographical location. These plants found in Turkey are produced for multi-purpose. Herbal medicine, plant chemicals, inputs in food and food additives can be given as examples to the cosmetics and perfumery sectors. MAPs is mainly grown in Aegean, Marmara, Mediterranean, Eastern Black Sea and Southeastern Anatolia regions (Pakdemirli, 2020). These products must be of sufficient quality to meet the demand of consumers and industry. Only in this way can it be collected in sufficient quantity and benefit from its market potential. The most important factors for the production of quality products are the development of the cultivated species, the determination of suitable ecological conditions, the harvesting without harming the nature, the determination of the post-harvest process in a way that will increase the production and market opportunities (Pakdemirli, 2020).

In recent years, the importance that consumers attach to a healthy lifestyle and the principle of sustainability has increased significantly. This situation directly affects the purchasing decisions of consumers and people have turned to natural ways, herbal products and traditional or alternative medicine, also called phytotherapy (Cadar, et al., 2021). After the Covid 19 pandemic, there has been increased interest in the effectiveness of plant-based products to strengthen people's immune system (Türkekul & Yıldız, 2021). The growing interest in MAPs, the use of different sectors, the increasing demand in the consumer and industry show that it has enormous economic growth potential (Roosta, et al., 2017).

The use of MAPs in Turkey dates to ancient times. As in the whole world, interest in herbal products and natural treatment methods is increasing in Turkey. Increasing demand in the market offers income-generating opportunities for producers. Medicinal aromatic plants are generally grown in rural areas, and the collection and sale of these plants is a source of income for many rural households (Türkekul & Yıldız, 2021).

For MAPs production figures, Turkey Statistic Institute (TSI) data has been examined. The latest data on MAPs production in Turkey are shown in detail in the table below. TSI has classified MAPs under different headings. The grouping of MAPs differs as fruits, vegetables, spice plants, plants used in perfumery, pharmacy and similar fields.

Looking at the production figures for 2022, it is seen that the top 3 MAPs produced in Turkey are red pepper, thyme and mint *(See Table 6).* In previous years, red pepper was followed by poppy and cumin in production figures. In 2022, thyme took second place with an increase of 109.5%. The thyme production area in Turkey increased by 159.00% in 2019 compared to the 2000s and reached 157074 decares (Karlı, et al., 2020). Denizli province constitutes 92.49% of the thyme production area in Turkey. In addition, it ranks first as the province with 87.55% of the production amount (Karlı, et al., 2020). Turkey is also an important country in terms of thyme and thyme oil exports. In addition to these, the most exported MAPs are respectively, bay leaf, cumin, anise and sage. In addition to these, the most exported MAPs are respectively; bay leaf, cumin, anise and sage in Turkey (Bayraktar, et al., 2017).

Table 6: Production of medicinal and aromatic plants obtained from cultivation in Turkey (tonnes)

MAPs	2000	2005	2010	2015	2019	2020	2021	2022
Red pepper	21.340	45.000	186.272	204.131	240.656	256.735	284 694	273 846
Thyme		6.400	11.190	12.992	17.965	23 866	21 174	44 358
Mint	5.000	7.750	11.772	14.945	16.011	23 471	26 438	26 911
Rose (for oil)				9.483	16.560	18 202	18020	19879
Poppy	11.564	12.403	33.555	30.730 1	27.288	20 542	21 037	12 240
Cumin	6.900	14.300	12.587	16.897	20.245	13 926	8 386	8 130
Lavander			400	747	1.462	3 499	6 108	7 722
Anise	20.000	9.500	13.992	9.050	17.589	10 716	6 936	5 878
Sage			80	411	1.233	1 271	1 848	2 356

Source: TÜİK, 2023

MAPs and their products are grouped into 3 main groups by the International Trade Center. The data on the trade of these products show that the foreign trade in Turkey has increased significantly in recent years. While Turkey's total exports were 143,564 thousand dollars in 2001, it reached 1,016,241 thousand dollars in 2019 with a total increase of 707% *(See Table 7).* The largest share in the exports of MAPs and its products is essential oils and resinoids, perfumery and cosmetics with 829.4 million USD. The export value of the product group (tea, coffee, Paraguayan tea, spices) that includes thyme, laurel and poppy plants, which we have a say in world trade, ranks second with 168.3 million dollars (Boztaşa, et al., 2021).

Table 7: Export number of medicinal and aromatic plants and products in Turkey Unit: thousand dollars

HS2 CODE	Products	2001	2015	2016	2017	2018	2019
09	Coffee, tea, Paraguayan tea, spice	57.908	168.481	196.162	178.338	180.685	168.349
13	Lacquer, gum, resin and. herbal juices and extracts	2.043	9.107	10.283	12.003	16.387	18.486
33	Essential oils and resinoids, perfumery, cosmetics etc.	83.613	695.467	696.446	762.425	782.920	829.406
TOTAL		143.564	873.055	902.891	952.766	979.992	1.016.241

Source: Boztaşa, et al., 2021

As can be seen in Table 8, In 2022, Turkey exported ginger, saffron, turmeric, turmeric, thyme, bay leaves and curry to the US the most with 35287 thousand USD. It is followed by China with 15671 thousand USD and Germany with 8257 thousand USD (TradeMap, 2023).

Table 8: Turkey Export Numbers (HS CODE: 0910 Ginger, saffron, turmeric, curcuma, thyme, bay leaves, curry and other spices) Unit: US Dollar thousand

Importers	Exported value in 2018	Exported value in 2019	Exported value in 2020	Exported value in 2021	Exported value in 2022
World	113700	118415	136087	139949	126774
United States of America	16697	35845	43373	44734	35287
China	144	3577	9079	12615	15671
Germany	9785	9246	10187	8699	8257
Canada	1797	4718	5214	5452	5586
Poland	3101	5830	5719	6599	5176
France	2059	2868	4044	4426	4443

United Kingdom	1054	2871	3260	4606	4149
Netherlands	2583	2903	3389	2874	3084
Japan	1640	2199	2267	2000	2247
Brazil	2315	1774	3149	2248	2181
Italy	1267	1686	1722	1818	2168
Belgium	592	2129	1963	2493	2134
Israel	1260	2384	2252	2192	1969
India	1050	1375	1830	1781	1893

Source: Trade Map, 2023

In 2022, anise, badian, fennel, coriander and cumin were exported mostly to the USA with 6614 thousand dollars. Egypt is in the 2nd place with 6029 thousand USD and Germany is the third importing country with 4087 thousand USD (TradeMap, 2023).

Table 9: Turkey Export Numbers (HS CODE: 0909 Seeds of anis, badian, fennel, coriander, cumin or caraway; juniper berries) Unit: US Dollar thousand

Importers	Exported value in 2018	Exported value in 2019	Exported value in 2020	Exported value in 2021	Exported value in 2022
World	31994	39357	47791	46709	38162
United States of America	3738	5816	11319	9173	6614
Egypt	271	362	1564	6850	6029
Germany	5763	5473	4591	5709	4087
United Kingdom	667	4080	4396	3221	3662
Morocco	107	264	586	431	3139
Syrian Arab Republic	38	1419	4539	2634	1803
Netherlands	2118	4447	2663	2417	1483
France	2250	4058	4537	2701	1282
Belgium	21	595	838	1645	883
Bangladesh	7098	2007	0	1822	722
Japan	467	923	1242	958	682
Sweden	57	565	1137	925	632
India	67	186	684	362	556
Spain	219	850	552	852	492

Source: Trade Map, 2023

In 2022, plants in seeds and fruits grouped with 1211 HS code, mainly used in perfumery, were exported to Germany with 8855 thousand USD. It is followed by UK with 3224 thousand USD *(See Table 10)*. In addition, England, France, Netherlands, Japan, Poland, Belgium, India are the countries to which Turkey exports MAPs plant groups (TradeMap, 2023).

Table 10: Turkey Export Numbers (HS CODE:1211 Plants and parts of plants, incl. seeds and fruits, of a kind used primarily in perfumery) Unit: US Dollar thousand

Importers	Exported value in 2018	Exported value in 2019	Exported value in 2020	Exported value in 2021	Exported value in 2022
World	20336	24399	26052	30709	32005
Germany	5184	6828	7127	9273	8855
United States of America	1130	6349	6793	7051	8118
United Kingdom	875	1995	2473	3158	3224
Canada	211	897	1015	1182	1120
France	828	787	799	1034	1038
Japan	478	750	776	759	825
Egypt	165	270	216	242	622
Australia	221	573	471	545	566
Italy	425	550	600	598	557
Netherlands	182	191	263	335	373
Iraq	204	204	158	199	355
Poland	466	413	373	494	344
Iran, Islamic Republic of	88	47	5	47	343
China	221	391	270	290	301

Source: Trade Map, 2023

When the export shares of individual countries are analyzed according to the average of 2011-2020 period, Brazil (11.5%) ranks first, followed by Vietnam (8.3%), Germany (6.3%), India (6.2%) and China (5.7%) is coming (Türkekul & Yıldız, 2021).

Based on this information, it can be said that Germany, India and China are among the strongest exporters in the MAPs sector. As stated in the previous data, these countries are among the countries to which Turkey exports MAPs. In fact, as a result of these interests, we can understand that Turkey's position in the market is strong.

MAPs can be exported raw in line with the needs and demands of most markets or offered to the market as essential oil by creating added value. However, since most of the exports of MAPs consist of unprocessed products, sufficient added value cannot be provided to the Turkey's economy. The main reason is the inadequacies in the MAPs processing industry in Turkey. Due to this situation, raw exports of MAPs are higher compared to value-added products. The point that will make a difference in the market is to ensure that the product is exported raw, as well as being converted into a value-added product and meeting the consumer. The development of the processing industry of MAPs will provide significant contributions to the regional industrialists and farmers with the employment it will create as well as the country's economy. With stability in production, high quality crop production will be possible. Turkey's commercial position in this field will be strengthened if it becomes sufficient for the processing of the raw product because of the development in the industry (T.C. Sanayi ve Teknoloji Bakanlığı, 2021).

On a yearly basis, there has been an increase in essential oil trade in Turkey. On a provincial basis, there has been an increase in the number of essential oil production facilities in the provinces of Antalya, Isparta, Mersin, Hatay, Manisa and Muğla, mainly in the Aegean Region and the Mediterranean Region (T.C. Sanayi ve Teknoloji Bakanlığı, 2021).

Thyme generally used in commercial in Turkey with its high essential oil content. The most exported species, which are used in the production of essential oils, are Izmir thyme; ball thyme, Istanbul thyme; black thyme, Sutculer thyme; highland thyme, buckle thyme, Alanya thyme; white thyme (Pakdemirli, 2020).

Table 11: Turkey Export Numbers (HS CODE: 3301) Unit: US Dollar thousand

Importers	Exported value in 2018	Exported value in 2019	Exported value in 2020	Exported value in 2021	Exported value in 2022
World	47481	40065	37894	37917	44419
France	24148	20028	13476	18756	25706
Germany	3826	3829	2674	2438	2871
United States of America	4281	2654	7958	3731	2603
United Kingdom	4332	3925	2485	3126	2425
Spain	1047	674	1010	839	1432
Switzerland	1557	1444	1482	940	1289
Netherlands	300	223	257	523	1170
Hungary	193	496	848	1229	994
India	188	397	643	475	606
Belgium	187	266	344	362	556
Korea, Republic of	832	930	932	1069	536
China	313	753	987	350	496
Albania	1	4	68	252	441
Canada	911	802	1438	242	382

Source: TradeMap, 2023

2.1.2.1. Overview of Major Competitors

There are many effective competitors in the Medicinal and Aromatic Plants market. There is a monopolistic competition with no country has more than 10 % of the market share. In addition, large exporters have about 35% of the market and other exporters can take this opportunity to enter the market (Roosta et. al., 2017). For MAPs and essential oil industry, China, India, Vietnam, Germany, France, Italy are the main exporting countries worldwide (Trade Map, 2023). In addition, according to Türkekul and Yıldız (2021) mentioned that Brazil, India and Vietnam have a strong comparative advantage in international markets.

The top 3 exporters in the ginger, saffron, turmeric, curcuma, thyme, bay leaf, curry product group between 2018-2022 are China, India and the Netherlands. After Iran and Germany, Turkey is the 6th exporter in the market (Trade Map, 2023). In the category of anis, badian, fennel, coriander, cumin, juniper berries, India is the biggest competitor in the market. Vietnam, China and Syria are among the other competitor countries in the market. Turkey is the 5th largest exporter for this product group. The biggest competitor in the essential oils market is US. US, India, France, Brazil and China are the top 5 major exporters (Trade Map, 2023).

2.1.2.2. Overview of Target Customers

MAPs are rich in bioactive substances and contain various secondary metabolites, so they have many benefits. In addition, MAPs, with their active bio-compounds, strengthen the immune system against disease-causing organisms and help its development. For this reason, they also use MAPs as a preventive and complementary treatment option. Additionally, scientific research has shown that plants produced naturally in Turkey and used for many purposes such as food, tea, spice, condiment, incense are successful in protecting against microbial diseases and in the treatment of these diseases (Kavaklı, et al., 2023).

In the global market, Singapore, Japan, Germany, Malaysia, and the USA are prioritized as the target markets for Medicinal and Aromatic Plants (Roosta et.al., 2017). China, USA, EU have the largest import share in the sector and should be important target markets. These countries have the potential to become leaders in the world import market of MAPs (Roosta et.al., 2017). In recent years, the importance that consumers attach to a healthy lifestyle and the principle of sustainability has increased significantly. This situation directly affects the purchasing decisions of consumers and people have turned to natural ways, herbal products and traditional or alternative medicine, also called phytotherapy (Cadar, et al., 2021). After the Covid 19 pandemic, there has been increased interest in the effectiveness of plant-based products to strengthen people's immune system (Türkekul & Yıldız, 2021). The growing interest in MAPs, the use of different sectors, the increasing demand in the consumer and industry show that it has enormous economic growth potential (Roosta, et al., 2017).

People turned to consuming natural products and herbs even before they had access to vaccines or other drugs against Covid 19. The use of plants and MAPs for therapeutic purposes is not a new method, its use as a method of protection and treatment from diseases dates to ancient times. Recently, people have preferred MAPs to protect themselves from Covid 19 (Kavaklı, et al., 2023).

A study with the content of "The Use of Medicinal and Aromatic Plants During Covid-19 Pandemic" was conducted in Turkey in 2021. The survey was conducted with random participants from different regions of Turkey. As a result of this study, which was completed using the data of 523 people, data on the use and frequency of use of medicinal and aromatic plants before and after the Covid-19 pandemic were revealed (Kavaklı, et al., 2023).

As a result of the research, 45.2% of the participants stated that they purchase MAPs from herbalists while 22.4% buy from supermarkets. Another question asked to the participants was, "Do you believe that the medicinal and aromatic herbs you use will strengthen your immunity and protect you from the virus?". Most of the participants said "yes" with a rate of 48.2%. 38.1% stated their indecision by saying they are not sure (Kavaklı, et al., 2023).

As a result of this research, most of the participants believed that they could improve their immune systems and protect themselves from Covid19 by using MAPs. The MAPs commonly used after the emergence of the Covid 19 pandemic are thyme, linden, sage, ginger, mint, turmeric, rosehip, lavender. Scientifically, there is no evidence or information in the literature that these MAPs have protection for Covid 19 yet. However, these plants are used against respiratory diseases with similar symptoms to Covid-19 and provide benefits (Kavaklı, et al., 2023).

2.1.2.3. Overview of Market Potential

According to researches, the main market drivers for essential oils are listed as; the increase in consumers' preferences for natural products, the increase in the popularity of spa and aromatherapy, the increase in disposable income of consumers as a result of higher living standards, and the increase in awareness of the side effects of chemicals (Barbieri & Borsotto, 2018). Antibacterial and antiseptic properties of essential oils are among the factors that increase their use and popularity. Especially after Covid19, awareness consumers tend to use essential oils as a natural alternative to protect themselves from bacteria and strengthen their immune systems. Additionally, rising depression and anxiety cases is another driving forces in the essential oil markets.

Consumers are becoming aware of the negative effects of consuming synthetic ingredients and their preferences are shifting towards alternative directions. At this point, some institutions, such as the Food and Drug Administration (FDA), are working on banning the use of various artificial sweeteners in the food and beverage industry. In addition, the European Union has implemented strict rules against the use of chemical ingredients in food products, medicines and nutritional supplements. Thus, these rules forced manufacturers to use ingredients derived from natural sources. As a result of such government regulations and rules, consumers' awareness of the harms of synthetic sweeteners is increasing. The demand for natural products is increasing and further stimulating the essential oils market (Markets and Markets , 2022).

However, incorrect harvesting methods and depletion of natural resources are among the factors that will limit market growth to a certain extent. Improper harvesting is actually one of the biggest problems in the MAPs industry. Agricultural practices in accordance with the principles of sustainability should be applied.

There are 1732 plant species in İzmir, approximately 146 species of these plants are endemic to Western Anatolia and İzmir. There are also very different and valuable endemic plants in these regions of Izmir, which is the center of historical regions and ancient cities. The bellflower found in the ruins of Ephesus, the thyme species origanum sipyleum and the İzmir thyme origanum onites can be given as examples. Endemic plants are located off the İzmir mountains, and they are generally concentrated in the high parts of Nif Mountain, Ödemiş Bozdağlar and Manisa Mountains. Manisa Spil National Park and the plants here are relatively protected, but Nif mountain and Bozdag region are unprotected. For example, Salvia smyrnaea is only found in İzmir Nif Mountain and Aydın Mountain in the world, but it is an endemic sage species under the threat of extinction. (Nakiboğlu, 2012).

In research which made in Izmir, they divided two part the impact of trade and production of MAPs; producers/collectors’ problems and problem at exportation level.

The production of MAPs is performed as a sub-activity, so specialization is difficult for producers/collectors. Improper collection and inadequate storage can pose a significant threat to the survival of plant populations, leading to their potential extinction and loss as well as deterioration. On the other hand, legislation problems impact on export of MAPs. MAP exporting companies do not cooperate and cooperate in foreign MAP markets, so they cannot compete with foreign competitors (Arkutoğlu, et al., 2002).

As a result of this research, local companies in the province of Izmir are faced with an important challenge that hinders their exports insufficient research on correct harvest and cultivation. To address this issue, it is essential that companies engage in extensive research focusing on optimum agricultural practices, sustainability, and nature conservation. In addition, manufacturers are required to receive training to effectively implement these practices (Arkutoğlu, et al., 2002).

To remain competitive and safeguard their market position, exporting companies should forge partnerships with foreign counterparts to boost their export potential. Collaborating with foreign companies enables them to harness combined resources, knowledge, and networks, facilitating market expansion and growth. Additionally, companies should strive to achieve their desired pricing levels by enhancing product quality, incorporating value-added features, optimizing supply chains, and implementing effective pricing strategies. By doing so, they can ensure profitability and long-term sustainability.

According to the data of the Turkish Exporters Assembly, İzmir is the fourth largest exporter in Turkey with 688 million 887.84 thousand dollars in the cereals, pulses and oilseeds product group.

Table 12: Export figures of cereals, pulses, oilseeds (Cereal HS Code: 100890000000, Pulses HS Code: 293379, Oil Seeds HS Code: 120799200019)

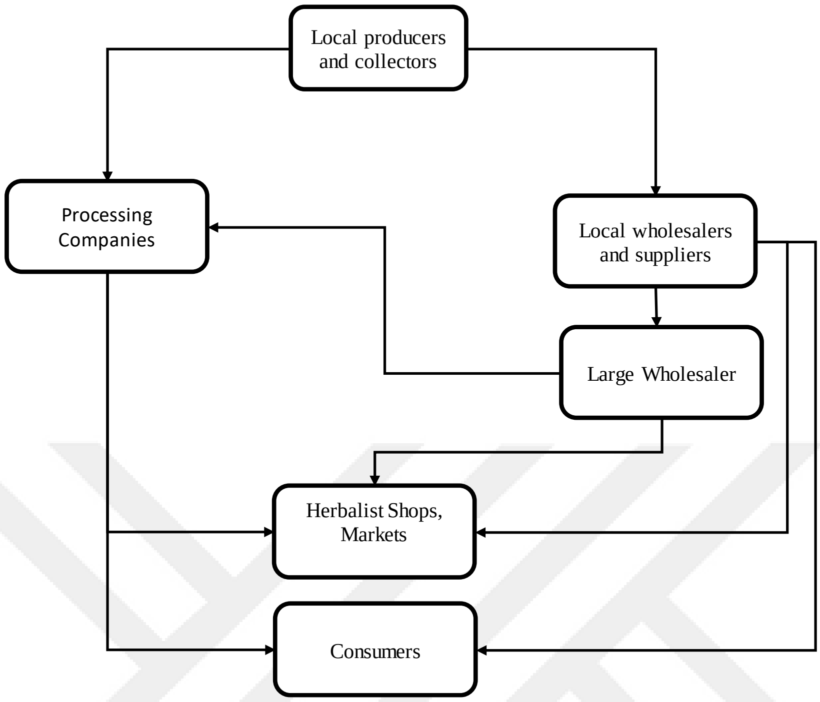
	2019	2020	2021	2022	Changes
İSTANBUL	2.174.691,59	2.221.081,09	2.675.235,62	3.323.211,58	%24,2
GAZIANTEP	1.593.811,12	1.892.662,03	2.465.723,67	2.910.220,01	%18,0
MERSIN	399.312,61	530.736,74	695.077,79	883.391,56	%27,1
İZMIR	360.811,76	370.456,19	464.596,87	688.887,84	%48,3
MARDIN	307.818,37	346.651,48	459.685,73	613.071,93	%33,4

Source: TİM, 2023

2.1.2.4. Overview of Supply Chain

There are a variety of players in the MAP industry, including primary collectors and producers, local contractors, regional wholesale markets, major wholesale markets, and specialty suppliers. Plants are generally grown or collected by small- or large-scale farmers. Producers and collectors of MAPs sell products to the local wholesalers and packaging companies. Also, processing companies buy MAPs directly from local collectors and wholesalers. The processed and packaged finished products are meeting with final customers by herbalists' shops and markets. Usually, the industry buys directly from suppliers and wholesalers rather than directly from small farmers (Türkekul & Yıldız, 2021).

Figure 1: Supply Chain of MAPs in Turkey



Source: Hasdemir, 2021

2.1.2.5. Overview of Potential Threats & Opportunity in the Market

There are 9,222 plant species and 3,649 endemic plant species in Turkey. 500 of them are used for medicinal and aromatic purposes. Unfortunately, there is not enough production to meet the quantity and quality demanded by nationally and international markets. The global world market demands high quality standard products with a production style that allows forward planning. Additionally, production by collecting from nature cannot meet the raw material needs of the MAPs sector continuously and uninterruptedly. At this point, it is necessary to develop aquaculture-based production. Only in this way will it be possible for Turkey to have a permanent place in the market (Hasdemir, 2021) .

Unfortunately, there is no clear data on the production, cultivation and marketing of MAPs varieties. In addition, since there is no separate HS code for MAPs varieties, it is difficult to analyze foreign trade figures and market positions. Compare to other products there is no market deep despite some MAPs this situation threats new investors who decide enter to market. In addition, there is no definition of value-added products in the sector that reveals the marketing system (Hasdemir, 2021). A variety of products can be obtained from MAPs, for example medicines, cosmetics, nutritional supplements, teas, essential and aromatherapy products, but to seize these opportunities it is important to identify the potential and market demands of the products.

Many MAPs, both cultivated and collected from nature, are marketed as raw in the sector. Unfortunately, the processing capacity into different products is not sufficient, considering the active ingredient, benefits, usage areas and added value transformation of the products. For this reason, the profitability of production decreases, and as a result, capital inflows into the sector remain below the potential. On the other hand, there are many deficiencies in terms of management, institutions in the fields of production, distribution and health should work in a multidisciplinary manner, but it is argued that there are deficiencies in this field. Working in coordination and cooperation of the institutions in the chain will affect the management of the processes as production, collection, marketing, and processing (Hasdemir, 2021).

CHAPTER THREE
RESEARCH METHODOLY

3.1. THE SUBJECT OF THIS RESEARCH

The subject of the research is to determine the parameters affecting export performance and the challenges encountered by exporter companies operating in the MAPs and essential oil sector in Izmir.

3.2. THE PURPOSE AND SIGNIFICANCE OF THIS RESERCH

This thesis aims to examine the export potential and market analysis of companies operating in the sector of MAPs and essential oils in İzmir. The primary objective is to gain a comprehensive understanding of the export potential and market dynamics within this sector, providing valuable insights for businesses to gain and maintain competitive advantage in the global arena. In this vein, the overarching goal of this research is to unveil and analyze the following specific objectives through which vital insights are generated to contribute both in theory and practice as managerial implications.

- To evaluate the current nature and export performance of companies in MAPs and essential oils sector in İzmir.
- To identify the core challenges of exporting companies and the ultimate sources of these challenges through the lens of international business.
- To better comprehend the integration of İzmir's sector into global markets which provide opportunities for exporting companies to expand their market scope.

The sector of MAPs and essential oils hold great potential due to the increasing demand for natural products particularly, in the fields of health and cosmetics. The evaluation of international business activities of MAPs and essential oil exporting companies located in İzmir, which reveals the potential to make significant contributions to the local economy. In the light of the existing literature, the identification and development of international strategies for exporting companies to outperform their rivals is at stake in this study.

Furthermore, this thesis research will provide significant knowledge to support the sustainable growth of the related sector and enhance the value-added business activities. Therefore, the study holds significant importance both from an academic and industrial perspective that helps achievement of sustainable competitive advantage.

3.2.2. Data Collection

The sample of this research encompasses the exporting companies operating in MAPs and essential oil sector in Izmir. The records of the Aegean Exporters' Associations are consulted to identify the existing firms competing over relevant product groups operating in the agricultural sector are scrutinized. In this regard, convenience sampling, type of nonrandom sampling, is utilized, which is members of target group who meet the study criteria are included in the purpose of the study (Etikan et. al., 2016; Emerson, 2015).

In MAPs and essential oils market, there are 46 companies registered in Aegean Exporters' Associations. The variation in company size and internationalization age enables to overcome the external validity issues (Palinkas, et al., 2015; Eisenhardt, 1989). The sample size determined according to the saturation point (Strauss & Corbin, 1998). The duration of the interviews between 40-60 minutes. As the answer to the questions started to repeat, the interview process completed by the 13th interview. Participants answered carefully during the interview which immediately transcribed verbatim. The profiles of participants are indicated in Table 13.

Overall, while data collection process took two months, exemination of the collected data lasted for three months. For data collection, semi-structured interviews are conducted with related companies. A lecturer and a master student utilized the existing literature that shed light on building interview questions. Interviews are conducted via video conference and telephone. The interview questions and the scope of the study are sent to inform the participants in advance to ensure that they have adaquate knowledge and also they are willing to participate in this study. More importantly, they are guarateed that the data they share is kept confidential and not to be shared the company identity and the name of the participant, which is important for validity issues. Accordingly, the sample of this study addresses executives, foreign trade managers, foreign trade specialists, sales and product managers and general managers working in exporting companies.

In terms of structuring the interview questions, the first part focuses on general profile of the participated firms. In addition to this, the second part targets questions to unveil the factors behind the achievement of superior international business performance. Furthermore, the last part includes questions regarding the difficulties experienced in export operations and companies' future goals in the global arena. Additionally, the web pages of the participating companies are analyzed to ensure and improve accuracy of collected data.

Table 13: The Profile of Firms and Participants

Company	**Job Title of the Interviewee & Tenure in the Company**	**Firm Age (In Years)**	**Internationalization Age (In Years)**	**Export Ratio**
Company A	Product and Sales Manager: 3 Years	14	14	% 98
Company B	Owner of the Company: 12 Years in the company 24 years in the sector	12	12	% 90
Company C	Food Engineer: 1 Year	6	6	% 25
Company D	General Manager: 6 years	7	7	%70
Company E	Owner of the company: 15 years	15	15	% 90
Company F	Assistant Manager: 5 years	50	50	% 100
Company G	Foreign Trade Specialists: 7 Years	50	50	%100
Company H	Foreign Trade Manager: 6 years	40	40	% 50
Company I	Managing Director: 33 Years	33	33	%98
Company J	Managing Director: 6 years	28	15	% 45

Company K	Owner of the company: 11 years	11	11	% 80
Company L	Owner of the company: 23 years	23	20	% 10
Company M	Owner of the company: 2 years in the company 20 years in the sector	2	2	% 90

Source: Created by the author, 2024

3.2.3. Data Analysis

In this research, a qualitative methodology was adopted to identify the export potential of companies in the medicinal and aromatic plants (MAPs) and essential oils sector. Qualitative research is defined as a method that seeks to understand social phenomena through the collection and analysis of non-numerical data, allowing for a deeper exploration of participants' experiences, beliefs, and motivations (Creswell, 2014). Semi-structured interviews were conducted with key representatives from 13 exporting companies in İzmir, providing a platform for participants to share their insights regarding their export activities, challenges, and market dynamics. The data collected from these interviews were analyzed using content analysis, which is a systematic approach for interpreting textual data by identifying themes, patterns, and trends (Krippendorff, 2013). This methodology enabled a comprehensive understanding of the sector's export potential and the factors shaping its integration into global markets.

During the data analysis process, examples were included in the transcript to strengthen the validity of the findings (Tracy, 2010). In addition, to increase the validity a triangulation analysis is carried out by analyzing the web pages of the participating companies to ensure consistency (Renz et.al., 2018). In order to increase the reliability of the study, the outputs of the study were analyzed in consultation with the lecturer and some corrections were made.

3.2.4. Findings of the Study

In order to determine the factors affecting export performance in the MAPs and essential oils sector, the companies are asked to share their views and opinions. Marketing, manufacturing, service quality, networking, and supply chain capabilities are among the most frequently mentioned terms *(see table 14)*. In addition, key comments and their frequencies are shown in the table 14.

3.2.4.1. Marketing Capabilities

Customer satisfaction and loyalty, communication with customers and improved reputation, adaptation to customer preferences, using pricing skills and systems to respond quickly to market changes are among marketing capabilities (Santos-Vijande et.al., 2012). There are many studies in the literature on the effect of a company's marketing capabilities on export performance. A study revealed how marketing capabilities, pricing capability, product development capability and marketing communication capability mediate the market orientation- performance relationship (Pham et.al., 2017). In addition to this, in the literature, many studies mentioned that marketing capabilities have a positive, significant and direct relationship with performance (Cruz-Ros & Gonzalez-Cruz, 2015). Exporting companies must have dynamic marketing capabilities to effectively manage information and gain positional advantage in export markets (Hoque et. al., 2021). In order to achieve success, companies should have the marketing capabilities to adapt to the rapidly changing market by repeatedly changing their information management processes (Hoque et. al., 2021). New product development, customer relationship management, market orientation, and networking ability are among the elements of marketing capabilities mentioned in the literature (Hoque et. al., 2021).

Additionally, the second most repeated capability in interviews is marketing capability. Customer trust, customer satisfaction, reputation, customer loyalty, product differentiation and adaptation are among the basic elements mentioned in the interviews.

An extract from the interviews is as follows.

We are a completely customer-oriented company. We provide our services based on the customers demand. We carry out our operations customer-oriented. For instance, if the customer is not satisfied with the quality of the product, we send new products quickly. Since we have been in this industry for years, our customer portfolio is very wide and our relationships are very good. The main reason for our export performance is our customer-oriented approach. (Foreign Trade Specialist-Company G)

Many companies in this sector export products like us, but I can say that what makes us different is our bureaucracy with our customers. We have a relationship based on trust with our customers that goes back many years. We can move forward by taking initiative for customer satisfaction. For instance in case of possible problems, we can carry out the processes outside working hours. We always try to ensure customer satisfaction by keeping our promises (Owner of the Company – Company E)

3.2.4.2. Manufacturing Capabilities

A firm's ability to compete on the basis of time, flexibility, low cost and product quality are among the production capabilities associated with competitive success (Yang, 2013). Consistent product quality, cost control, time/yield speed, volume and product flexibility are among the production capabilities of companies (Yang, 2013). In the literature, among manufacturing capability factors, production in line with market requirements are also mentioned. (Yang, 2013). The interviewees emphasize the importance of production capacity, production quality and production techniques for export performance.

An extract from the interviews is as follows:

Some customers request specialized products that require expertise in unique production techniques. Given our proficiency in these specialized techniques, which are not universally mastered within the industry, we are equipped to provide products tailored to meet specific customer demands. (Product and Sales Manager-Company A)

3.2.4.3. Service Quality Capabilities

Service quality is defined as the extent to which the level of service received by customers meets their expectations (Little & Dean, 2006). Schlesinger and Zornitsky (1991) stated that increasing employee' service capabilities increases job satisfaction and ultimately customer satisfaction. Service quality capabilities are associated with the ensuring high quality, fast, on-time reliable service provision and after-sales processes (Cruz-Ros & Gonzalez-Cruz, 2015). In addition to this, researchers have stated that service quality capabilities are directly related to customer satisfaction and ultimately to the long-term profitability of firms (Cruz-Ros & Gonzalez-Cruz, 2015). The interviewees emphasized the importance of being able to deliver services as promised, on time and reliably for export performance.

> *Each customer has different demands like product analyses, tests, packaging. We provide products in line with our customer demands. Additionally, we realize the shipment according to the determined loading date, usually within 15 days. In this process, the customer should not be kept waiting, it is critical for customer satisfaction to comply with the determined shipment date and to provide high quality service (Owner of the Company- Company E)*

In the literature, supply chain capabilities classified as supply chain collaboration, supply chain visibility, supply chain flexibility and supply chain speed. The healthy execution of all supply chain activities ensured by these competencies (Mandal et. al., 2016). A company's agile and resilient actions significantly affect supply chain performance, and as a result, companyies' competitiveness in the market increases (Mandal et. al., 2016).

An abstract that reflects the supply chain capabilities is as follows:

> *These products are seasonal products. All products eligible for export to the EU based on standards are purchased within 1 month. We need to buy products during this 1-month period to export to EU countries. Therefore, since the products are seasonal, it is very important to find and supply the product at the right time with the right quality and the right feature. (Product and Slaes Manager- Company A)"*

3.2.4.4. Networking Capabilities

In the literature, networking capability is defined as the ability of firms to develop and use inter-organisational relationships to gain access to different resources owned by other actors (Acostaa et.al, 2018). Networking capability enables rapidly firms to identify and act on market opportunities to accelerate their internationalisation process (Mort & Weerawardena, 2006; Ajayi, 2016). The firm's network capabilities of initiation, coordination and learning involve building strong ties, relationships and trust among trading partners (Ajayi, 2016). In addition, researchers define international network capabilities as the ability of a company to obtain resources from the environment by creating partnerships and social relationships to use in its activities in international markets (Acostaa et.al, 2018).

Most of the interviewees mentioned strong relationships with their customers as one of the most important reasons for their export performance. Since most of the companies have been operating in this sector since time immemorial, they have built strong relationships with their customers. In addition to, there is a positive link between participation in trade fairs, networking ability and exports (Silva, Moutinho, & Vale, 2022). The interviewees mentioned that they actively participate in fairs and that it is a very important factor for creating new business new customers.

An abstract that reflects the networking capabilities is as follows:

> *Our manager follows the sector not only in Turkey but also in the world. India holds the world spice market in its hands. Our company has a strong relationship with India and closely follows the developments in the sector. In addition, our manager visits production facilities in Spain, keeps in touch with the companies there and builds strong relationships. (Foreign Trade Manager- Company H)*
> *We have been in this sector for many years, we have wide customer profile and we have strong relationships with our customers. However, we also take an active role in trade fairs. I think fairs are very important to expanding the customer profile and for opening up to new markets. For instance there were companies that we could not obtain for years but afte10 years they became our customers in the trade fair. For this reason, I think trade fairs are very important in finding customers and opening up to new markets (Owner of the Company- Company F)*

Table 14: Firm Capabilities

Second Order	**First Order**	**Sample first order comments**	**Frequency**
Marketing Capabilties	Customer orientation Product differentiation Pricing strategy Adaptation	Preparation of products in accordance with customer demands Understanding and meeting the demands and requests of customers Work customer-oriented, to solve the problems encountered and to provide trust Working by adapting to changing conditions	23
Manufacturing Capabililies	Product Quality Production Volume	Production in line with quality criteria Producing at the standards required by customers countries	15
Operational and Supply Chain Capabilities	Ability to provide high quality service. Ability to provide service punctually. Ability to provide services as reliably. Supply Chain Flexibility Supply Chain Velocity Supply Chain Collaboration	Providing products quickly upon customer request and to ensure fast delivery to the customer.	14

		Finding and supplying the product at the right time and quality	
Networking Capabilities	Creating partnership Coordination with trade partners Strong relationships with trade partners	Strong and long-standing relationships with suppliers and customers Agreements with forwerders, laboratories	14

Source: Created by the author, 2024

3.2.4.5. Difficulties and Barries Encountered in Export Operations

The first factor mentioned by each interviewee that negatively affect export operations is the problem in the PA (Pyrrolizidine Alkoloid) content in Thyme as a result of the product content limit imposed by the European Union PA, which contains foreign matter in the raw materials, is caused by spot contamination of the fields and by unconsciously collecting weeds together during harvesting (TC. Tarım ve Orman Bakanlığı, 2023). Interviewees frequently mentioned that due to the fact that the PA content of Turkish thyme is above the limit set by Europe, there has been a serious decline in thyme sales, almost no sales and returns on deliveries. As a result of this, they were also mentioned that there was a tendency to turn to other European countries such as Greece. The fact that Greece is member of EU gives it many advantages in its sales (transport cost, commericial advantage, no customs clearance, etc.).

The following abstracts reflect the role of EU limits:

In recent years, the PA limit in Thyme has become the most important problem for EU exports. Therefore, sales have decreased, prices have dropped a lot and producers have reduced production. There is a contraction in the sector in terms of thyme producers and this situation directly causes a decrease in product and a decrease in our sales (Manging Director- Company I).

PA content in thyme has been limited in the EU. The PA limits of thyme grown in Turkey could not meet the EU standards. For a certain period of time, our thyme sales to Europe could not be realised. Our products were rejected and returned. At this point, since Greece has a thyme production potential, the EU preferred Greece thanks to its commercial advantages in the EU union (Food Engineer- Company C).

In addition, the interviewees also mentioned that due to the problem in the Suveyz canal, which offers the shortest route between Europe and Asia in global trade, logistics problems are rises, delivery times are prolonged and delivery costs are increased.

An abstract that reflects the barrier as follows:

The inability to use the Suez Canal after the attacks in the Red Sea negatively affected the ship transfer process and freight rates. This situation caused us to experience operational difficulties (Foreign Trade Specialist- Company G).

Companies gave the examples of customs and country prescriptions as another barrier to export operations of medicinal and aromatic plants. In addition, increasing labour costs, exchange rate differentials, inflationary environment, price-oriented market environment are among the other challenges mentioned by the interviewees.

An abstract that reflects the barrier as follows:

We exported products to China as a new market, but there are procedural problems in the export customs process. Certain permits must be obtained for exports to China, which makes the processes very difficult (Managing Director- Company H).

3.2.4.6. Superior Export Performance as the Outcome of Developing Firm Capabilities

Industry concentration, market share, growth, advertising, research and development (R&D), size and capital investment intensity are factors that are associated with financial performance in the literature (Capon et al., 1990). Financial performance measures include any measure of return on profit, such as assets, equity, etc. (Capon et al., 1990). In addition to, market share, customer satisfaction, customer loyalty/retention, brand equity and innovation have been identified as the main dimensions of marketing performance (Gao, 2010).

The interviewees underlined the customer satisfaction, customer loyalty as the primary factors affeting export performance. In addition, labaratuary and R&D investment, the importance of financial resources, and equity capital were mentioned as a factors affecting export performane. In this regard, market performance is mentioned more frequently.

An abstract that reflects the barrier as follows:

We approach the problems experienced by the customer with solution suggestions. I can say that customer satisfaction is ensured with products such as gifts offered alongside the sale. As a result, we also gain customer loyalty. (General Manager-Company D)

Another extract from the interviews are as follows:

Customer satisfaction through service quality is the most important factor for success in export performance. The products should be prepared in accordance with the customer specification. Customer loyalty comes as a result of customer satisfaction. Therefore, customers prefer us rather than other companies (Company G- Foreign Trade Specialists)

We are able to understand customers and quickly solve the problems they face. We satisfy our customers by serving in line with customer demands, offering quality products and the gifts we send with the products (Company D- General Manager)

Table 15 : Export Performance Outcomes

Second Order	**First Order**	**Sample First Comments**	**Frequency**
Firm Export Performance	Market Performance	* Ensuring customer satisfaction with high quality products and services	16
	Financial Performance	* Increasing market share in Europe * R&D and laboratory investment *Financial resources and equity capital	4
	Strategic Performance	* Gaining and sustainable competitive advantage * Effective managerial decision making regarding future export activities	7

Source: Created by the author, 2024

CONCLUSION

There is an increase in demand of the market of medicinal aromatic plants, essential oils and traditional herbs. Also, this demand is expected to increase over the years. Therefore, export operations of these products should be encouraged, and necessary supports should be provided (Karık & Tunçtürk, 2019). It should be aimed to increase the market share of the MAPs in domestic and foreign markets. In addition, actors such as farmers, aggregators, intermediaries, processors, wholesalers, retailers, exporters, importers, and consumers should be part of the marketing chain to competitively bring the right product to market. Furthermore, these actors should come together to coordinate and share information.

Moreover, quality management in the sector should be ensured through inspection and standardization. Besides this, for the marketing to be effective, the geographical indication of the products should be specified in the brand management. Also, institutions in the sector should be informed about cost-reducing measures, business support, and input support.

The results of the interviews with companies carrying out MAPs export operations in the Izmir region show that the demands and preferences of consumers are the most dynamic and decisive factor that determines the affect companies' export sales. Accordingly, market needs should be analyzed, and production processes should be planned taking into account consumer needs and demands. At this point, profitable production should be provided against the increasing demand. New international markets need to be found to avoid problems in the market due to increased supply. In addition, measures should be taken to protect the market position of MAPs such as thyme and laurel, which are currently in a strong position in the market. To be successful in international arena, production, packing and testing process of the products should be based on the quality criteria of the target market countries. At this point, the principle of sustainability should be adopted, not only after production, but also with the right harvest and cultivation practices, endangered plants should be protected.

The sustainability of medicinal and aromatic plants (MAPs) and essential oils is increasingly recognized as a critical factor in ensuring the long-term viability of these industries. Globally, there is a growing awareness among producers and companies about the importance of sustainable practices, driven by consumer demand for environmentally friendly products and the need to mitigate the adverse effects of overharvesting and habitat destruction. In many developed countries, producers are adopting sustainable cultivation methods, focusing on organic farming, biodiversity conservation, and ethical sourcing to meet stringent environmental standards and consumer expectations. In contrast, Turkey, while rich in biodiversity and having significant potential in the MAPs and essential oils sector, shows varying levels of awareness among producers and companies regarding sustainability practices. Although some Turkish producers are increasingly embracing sustainable methods, such as organic certification and eco-friendly farming practices, a substantial portion of the industry still lacks comprehensive knowledge and commitment to sustainability. This discrepancy highlights the need for targeted education and capacity-building initiatives in Turkey to enhance awareness of sustainable practices, thereby fostering a more environmentally responsible approach that aligns with global standards and meets the rising demand for sustainable products in the international market.

Most of the companies interviewed within the scope of the study are family-owned and have been carrying out export operations in this field for a long time. Because of experience in the sector and past customer relations, most companies have a large customer portfolio. In addition, it is repeatedly stated by the interviewees that participation in fairs is very valuable in order to open up new markets and expand the customer portfolio. As a result of this study, another important factors that brings success in the export of MAPs is ensuring of the necessary tests, certificates and analyzes of the products. It is very important to fulfil all legal requirements required by the destination country. Also, providing products at the standards and quality required by the customer brings success in exports in the sector.

Additionally, due to the seasonality of medical products, it is actually very important to supply the products in the right way, at the right time as well as the quality of the production process. In the sector, you can get ahead of other companies by supplying quality products from manufacturers at the right time. At this point, external factors such as climatic problems, forest fires, which affect the operational processes of the companies, also cause the inability to supply MAPs. In addition, companies had difficulties in product supply after the earthquake in Turkey. There are many MAPs producers/collectors in the earthquake region, especially in Hatay province. Since these suppliers could not operate in the region after the earthquake, there were disruptions in the raw material supply of the companies. As a result of these situations, there is a contraction in MAPs production in Turkey. This leads to an increase in raw material prices and an increase in costs for companies. Unfortunately, MAPs exports from Turkey are also falling due to declining raw materials. Furthermore, increasing labor costs, increase in exchange rate, increase in freight and other transport charges also put financial strain on the sector. Additionally, the unavailability of the Suez Canal after the attacks in the Red Sea had a negative impact on the ship transfer process and freight rates. This situation caused companies to experience operational difficulties.

Among the factors that negatively affect export activities, the most recurring factor is the problem of PA (Pyrrolizidine Alkaloid) content in thyme because of the product content limitation imposed by the European Union. The interviewers frequently mentioned that due to the PA content of Turkish oregano being above the limit set by Europe, there is a serious decrease in oregano sales, almost no sales and deliveries are returned. Therefore, a trend towards other European countries such as Greece is mentioned. The fact that Greece is an EU country provides many advantages for trade in the EU arena. Looking at the competitors in the sector in the world, Georgia is mentioned as another country that has a strong position in the market with its customs advantage for the Chinese market. As an example of the negative factors encountered in the essential oils sector, artificial and synthetic products in the market are mentioned. Especially in the Far East market, synthetic products are overtaking natural essential oils with low price policies. Since the prices remain high compared to other products, companies have become unpreferred and the export of essential oil products has been negatively affected.

Even though medicinal and aromatic plant sector is highly increasing, there are many problems, such as poor practices related to plant collection, which can lead to biodiversity loss and habitat destruction (Taghouti, et al., 2022). In addition, increasing knowledge on the trade of medicinal plants will also ensure better utilization of these products. At this point, policy makers should take action to improve this sector in terms of legislation regarding collection permits, management plans, raising consumers awareness about the quality control of products. In addition, new marketing approaches such as product design, packaging and new distribution channels should be introduced in the sector to meet customer expectations (Taghouti, et al., 2022).

This thesis has several limitations; in particular, the lack of comprehensive research in the existing literature on the export potential of the medicinal and aromatic plants (MAP) and essential oils sector, particularly in the context of Izmir, may limit the theoretical framework of the study. Furthermore, the qualitative methodology of semi-structured interviews with a limited number of respondents from exporting companies may lead to biases and may not fully capture the diversity of perspectives in the sector. To address these limitations, future research should focus on expanding the sample size to include a wider range of stakeholders from different regions, conducting quantitative studies to validate qualitative insights, and investigating the impact of specific government policies and market trends on export performance. In this way, subsequent studies can contribute to a more comprehensive understanding of the challenges and opportunities in the Medicinal Plants and Essential Oils sector in the global market.

This proposal outlines key recommendations for enhancing export operations within the sector. To achieve success, it is imperative to prioritize several critical factors, including product quality, the completion of requisite tests and analyses, and strict adherence to the regulations of the importing country. The marketing, production, supply chain, service quality, and networking capabilities of firms serve as essential drivers of export performance.

Furthermore, it is crucial to align product preparation and delivery with customer demands and expectations. A comprehensive analysis of market requirements is necessary to provide tailored services that address the diverse needs of customers in various markets. Establishing robust relationships with both suppliers and customers is equally vital. The procurement process for raw materials must be efficiently managed to ensure timely delivery and high product quality.

Moreover, maintaining high service quality, fulfilling commitments, and ensuring punctual delivery are essential for sustaining a competitive advantage in the marketplace. By implementing these strategies, firms can significantly enhance their capabilities in the international arena and improve their overall export performance.

In the context of government support, it is essential to ensure that accurate and comprehensive information regarding export requirements and available export incentives is readily accessible to businesses. This involves not only clearly outlining the necessary documentation and compliance measures required for successful export operations but also providing detailed guidance on the various incentives offered by the government to facilitate and promote international trade. By disseminating precise information on these matters, the government can empower companies to navigate the complexities of exporting more effectively, ultimately enhancing their competitiveness in the global marketplace.

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APPENDICES

APPENDIX 1: Interview Questions

Sayın Katılımcı,

Bu çalışma Dokuz Eylül Üniversitesi Dış Ticaret Yüksek Lisans programı kapsamında Prof. Dr. Gülüzar Kurt Gümüş ve Gonca Atak tarafından İzmir İlinde Tıbbi ve Aromatik Bitki ve Esansiyel Yağlar sektöründeki ihracat operasyonlarının değerlendirilmesi yönünde yapılan bir çalışmadır. Herhangi bir firma ismi, kimliği kesinlikle paylaşılmayacaktır. Hem katılımcının hem de şirketin gizliliği korunacaktır. Tüm bilgiler gizli tutulup, çalışma sonucu katılımcılar ile paylaşılacaktır. Aşağıdaki görüşme soruları Dokuz Eylül Üniversitesi Rektörlüğü, Etik Kurul Onayından geçmiştir.

Desteğiniz için çok teşekkürler.

Katılımcı Profili:

Eğitim Seviyesi:

Görev Süresi (Deneyim Yılı):

Mevcut şirketteki deneyim yılı:

Uluslararası Operasyonlarda deneyim yılı:

Şirket Profili

Kuruluş Yılı:

Uluslararasılaşma Yaşı:

Çalışan Sayısı:

İhracat Oranı:

Görüşme Soruları

1) İhracat operasyonlarının üretimden son aşamaya kadar nasıl yürütüldüğünü kısaca açıklayabilir misiniz?

2) Kaç ülkeye/bölgeye ihracat yapıyorsunuz?

3) Hangi pazarda pazar payınız en yüksek seviyededir?

4) Faaliyet gösterdiğiniz pazarlardan hangi daha rekabetçi?

5) Karşılaştırdığınızda, sizi rakiplerinizden daha iyi yapan ana faktörler nelerdir? (örn: inovasyon, pazar stratejisi, operasyonel kabiliyetler)

6) Rakiplerinizi sizden daha iyi yapan başlıca faktörler nelerdir?

7) İhracat performansını nasıl elde ediyorsunuz?

8) Bunu ayrıntılı olarak açıklayabilir misiniz?

9) Deneyimlerinize göre üstün ihracat performansının nihai kaynakları nelerdir?

10) Sizce bu kaynaklar pazardan pazara farklılık gösteriyor mu? Bunu açıklayabilir misiniz?

11) Paydaşlarınızla, örneğin devletle, müşterilerle veya tedarikçilerle ilişkileriniz nasıl? İhracat performansınızda ne tür bir rol oynuyorlar?

12) Operasyonlarınızda ne tür zorluklar veya güçlüklerle karşılaşıyorsunuz, örnekle açıklayabilir misiniz?

13) Departmanlar arası iletişim, hiyerarşi vb. dahil olmak üzere şirket içindeki atmosferden bahsedebilir misiniz? Firma içinde "bilgi akışı" nasıl yönetiliyor? (örn: departman toplantıları yoluyla bilgi yayılımı?

14) Şirket stratejileri ve uzman operasyonları hakkında kritik kararlar aldığında, tüm departmanlar dahil oluyor mu yoksa karar üst yönetim tarafından mı veriliyor?

15) Size göre şirketle ilgili faktörlerin ihracat performansında hayati bir rol oynadığını düşünüyor musunuz? (kurum kültürü, değerler, kurumsal yapı, kurum içi deneyim, ihracat taahhüdü vb. gibi)

16) Sizce her bir çalışan veya birey ihracat performansına ve ihracat stratejisine ne ölçüde katkıda bulunur?

17) Firmanızın hangi özellikleri rekabet avantajı sağlar (örn: yenilik, teknolojik yetenekler)

18) Şirketiniz ihracat faaliyetlerini yeni pazarlara genişletmeyi planlıyor mu? Evet ise, hangi pazarlar hedefleniyor ve neden?

19) İhracat operasyonlarınızda bir sorun ortaya çıktığında bu sorun nasıl ele alınıyor? Bir örnekle açıklayabilir misiniz?

APPENDIX 2: Interview Questions (Eng)

Dear Participant,

This study is a study conducted by Prof. Dr. Gülüzar Kurt Gümüş and Gonca Atak to analysis the export operations in the Medicinal and Aromatic Plants and Essential Oils sector in Izmir Province for the purpose of thesis study in Dokuz Eylül University Foreign Trade Master's program. Any company name and identity will never be shared. The confidentiality of both the participant and the company will be protected. All information will be kept confidential, and the result of the study will be shared with the participants. The following interview questions have been approved by the Ethics Committee of Dokuz Eylül University Rectorate.

Thank you very much for your support.

Participant Profile

Education Level:

Tenure (Years of Experience):

Years of experience in the current company:

Years of experience in International Operations:

Company Profile

Year of Foundation:

Internationalization Age:

Number of Employee:

Export Ratio:

Interview Questions

1) Can you briefly explain how export operations are conducted from production to last step.

2) How many countries//regions are you exporting to?

3) In which market your market share at the highest level?

4) Which market is more competitive?

5) When you compare, what are the main factors that make you better than your rivals? (ex: innovation, market strategy, operational capabilities)

6) In addition, what are the major factors that make your rivals better than you?

7) How do you survive and/or achieve superior performance?

8) Can you explain it in detail? (In need of more clarification give examples like R&D operations, networking, learning capabilities, innovation, product innovation or process innovation).

9) According to your experience what are the ultimate sources of superior export performance?

10) Do you think these sources differ from market to market? Can you explain it?

11) How is your relationship with your stakeholder, for example, government, customers, or suppliers? What kind of role do they play in your export performance?

12) What kind of difficulties or challenges you face in your operations can you explain it with example.

13) Can you talk about the internal atmosphere within the company including interdepartmental communication, hierarchy etc. How "knowledge flow" is managed within the firm? (ex: knowledge dissemination through departmental meetings?

14) When the company makes critical decisions about their strategy an expert operation, are all departments involved or the decision is made by top-management or "the owner"?

15) According to your understanding do you think company-related (or internal) factors play a vital role in expert succes? (Such as organizational culture, values, organizational structural, internal experience, export commitment, etc.)

16) To what extent do you think "each employee or individual contributes to export performance & export strategy"?

17) What characteristics or feature are related to firm itself provide competitive advantage (ex: innovation, technological capabilities)

18) Is your company planning to expand its export operations to new markets? If yes, which markets are targeted and why?

19) When a problem shows up how this problem is handled? Can you explain with an example?