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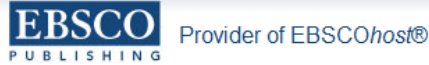
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Competitiveness of The Turkish Dried Fruit Sector

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The aim of this study was to reveal the competitiveness of dried fruit sector in İzmir. In this study, the competition level of dried fruits sector in İzmir was analyzed by applying Porter's Diamond Model. The total number of dried fruit firms in İzmir is 46. Data for this research were collected from the manager of 26 firms, that is 56.5 % of all the companies working in this sector. According to the results, the competitiveness level of İzmir for the sector was determined as medium. The most important finding of the research was that the state, which was classified as an outside factor in the model, was found to affect the competition level of the sector negatively due to high tax rates, complex legal arrangements and bureaucracy. The outcomes could be used to create both public sector policies and private sector policies in order to improve sector competitiveness.

Key Words: Dried fruit, Porter, Diamond Model, competitiveness, Turkey

Türk Kurutulmuş Meyve Sektörünün Rekabetçiliği

Bu çalışmanın amacı, kurutulmuş meyve sektörünün rekabet düzeyini ortaya koymaktır. Çalışmada kurutulmuş meyve sektörünün rekabet düzeyi, Porter'ın Elmas Modeli kullanılarak analiz edilmiştir. İzmir'de kurutulmuş meyve sektöründe faaliyet gösteren 46 firma bulunmaktadır. Bu firmaların %56.5'ine karşılık gelen 26 firma yöneticisiyle yüzyüze görüşülmüştür. Sonuçlara göre, sektörün İzmir ili için rekabetçilik düzeyi orta seviyededir. Araştırmanın en önemli bulgusu, modelde dışsal faktör olarak tanımlanan devletin, sektörün rekabet düzeyini; yüksek vergi oranları, karmaşık yasal düzenlemeler ve bürokrasi nedeniyle olumsuz etkilemesidir. Araştırma sonuçlarından, sektörün rekabetçiliğinin geliştirilmesi amacıyla, hem kamu hem de özel sektör politikalarının oluşturulmasında yararlanılabilir.

Anahtar Kelimeler: Kurutulmuş meyve, Porter, Elmas Modeli, rekabetçilik, Türkiye

¹This article is derived from the master thesis which titled as "Analysis of Competitive Level of the Turkish Dried Fruit and Vegetable Sector: The Case of İzmir".

Introduction

Turkey was the eleventh largest exporter of fresh fruit in the world in 2011 (EB, 2013). Turkey is also one of the most important producers and exporters countries of dried fruit. As a matter of fact, Turkey implemented about 80 % of dried apricots export, 55 % of dried figs export and 25 % of Sultanas export in the world in 2011 (FAO, 2013).

About 31 % of drying fruit facilities in Turkey is located in Aegean Region, 24 % of which belong to İzmir province (TKB, 2006). According to the last three years' average (2008/2010), 71% of İzmir province's food export belongs to the dried fruit sector (İZKA, 2010). Taking into account production and export potential of the dried fruit sector in İzmir, it can be concluded that its importance will increase significantly in the following years.

Competitiveness can be analyzed at the level of the whole economy, an individual sector or an individual firm (Traill and Pitts, 1998; Porter, 2000; Pitts et al, 2001; Porter, 2003; Wolff et al, 2014). In order to realize the economical contribution expected from the sector, determining the performance of competition has a great importance to attain a more competitive status both from the aspect of İzmir and Turkey.

The scarcity of the researches on the dried fruit and vegetable sector in Turkey and especially the lack of detailed current studies focused on the level of competition in İzmir, which is an important province for the sector, are the elements that increase the importance of this research.

Material and Methods

The Methods Used During Data Collection

Porter's Diamond Model was used to analyse the competition level of dried fruit sector in İzmir. The structured questions had been prepared with the help of the main and sub variables of the Diamond Model (Selli et al, 2010; Smit, 2010; Bashiri et al, 2013). Questionnaires were conducted via face-to-face meetings.

The fundamental variables related to the sector were supplied from the interviews with the representatives of İzmir Chamber of Commerce, Aegean Region Chamber of Industry, Aegean Exporters' Associations, İzmir Mercantile Exchange and the academicians from related departments in Aegean University. A total number of 10 interviews was applied, and according to the results the sub variables at the corners of the Diamond Model were determined.

By means of a survey, in which dried fruit firms managers responded to a special questionnaire, data were collected from 26 companies, which agreed to participate in the research.

The Methods Used in the Data Analysis

The basic method used for measuring the competition level of the sector is Porter's

Diamond Model. The whole method is based on the principle that the international competitiveness of a local company relies on its ability to take advantage of the local physical and business environment, as long as its potential production factors uniqueness (Neven and Droge, 2001; Al-Hiary et al, 2010; George and Manasis, 2010). In this model, designed as a diamond like structure, the four basic factors that effect the competitive advantages of any industry/sector are: factor conditions, firm strategy, structure and rivalry, related and supporting industries/organization and demand conditions (Figure 1).

The state of these conditions within economy creates the incentives, pressure and capabilities for firms to improve and grow essential ingredients of any industry/sector strategy (Cochrane et al, 2005). These determinants create the national environment in which companies are established and learn how to compete. Government is characterized as another external variable that affects the other four main variables (Porter, 1990a; Porter, 1990b). The Diamond Model, which determines competitive advantage, defines a system; for that reason the basic variables characterize the competitive advantages in general rather than separately (Bulu et al, 2006). In other words, the factors located on the

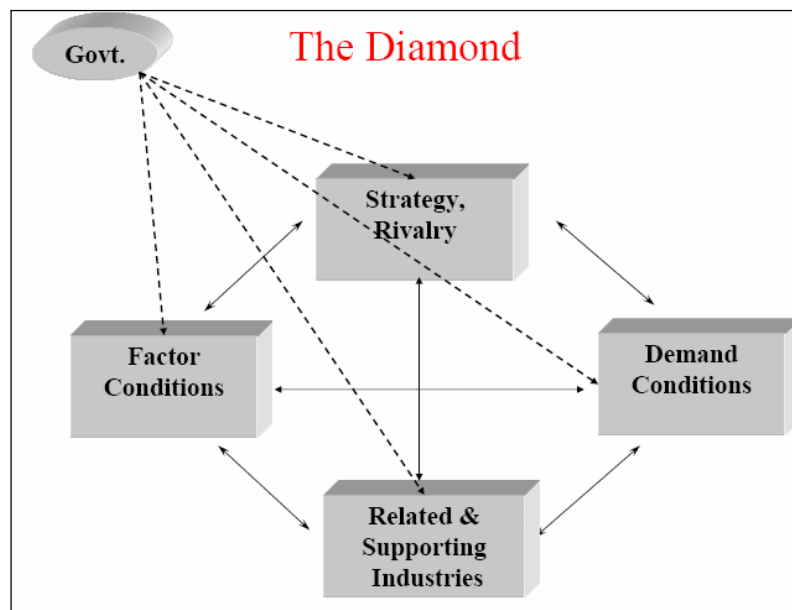


Figure 1. Porter's diamond model (Porter, 1990)

four sides of the system effect each other. For that reason the system gains a dynamic structure (Öz, 1999; Bulu et al 2007a; Bulu et al, 2007b).

In the study each of the variables was evaluated in three categories (High=3, Medium=2 and Low=1). In the model high was coded as "H", medium as "M" and low as "L". In the model total value of the variables determines the main variables, and total value of the main variables reveals the level of the competitiveness.

Results and Discussion

Competition is defined as the struggle or contest between the firms to meet their customer's demands, to satisfy their needs and to attract their attention. According to the analysis results, current competition level of dried fruit sector in İzmir has been determined as medium (Figure 2).

A. Factor Conditions (High)

1. Climate conditions (H) : The subtype coastal Aegean of Mediterranean climate is seen in İzmir (İZKA, 2009). The proper climate conditions are favorable for cultivation of various agricultural products.

2. Raw material variation (H) : İzmir is an important fruit production center.

3. Production of the raw material suitable for the processing (H) : İzmir has high potential in production quantity and selective potential in product variety. For this reason, agricultural sector can manage to compensate a huge amount of product variety and quantity that the food industry demanded.

4. Raw material prices (L): The raw material cost is high in İzmir. Especially in the recent years because of the low prices of the American and Iranian grapes, the competition has been affected negatively.

5. Raw material quality (H): The fruits which are cultivated in İzmir have high quality.

6. Labor Status (H): The labor needed for the sector can be easily allocated.

7. Packaging material quality (H): The facilities should transform the package into a strong marketing device and have an advantage in competition in order to have high shares in the market. The quality of packaging material in İzmir province is high.

8. Developments in packaging techniques (H):

The packaging industry in the province can consider the needs and advice of their customers by following the development of the world packaging sector closely.

9. Possibility of energy procurement (M):

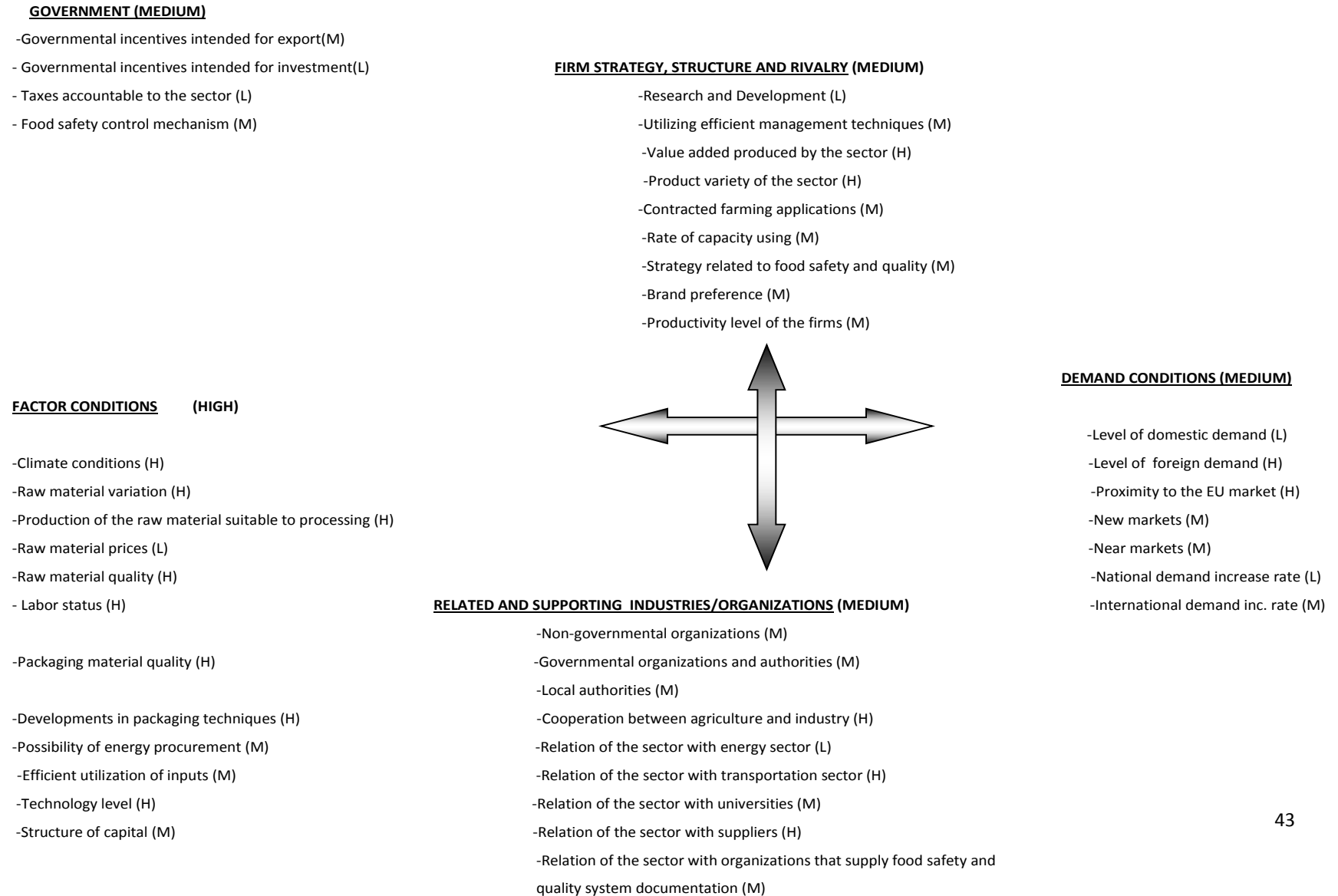
Developed countries give importance to the concepts such as: the safety of supply, sustainability, accessibility, the effect on the environment and acceptability according to the cost when constructing their frame to the energy (Kavak, 2005). Despite the fact of development, İzmir has some problems in energy sector. High prices for electricity, petroleum and natural gas, relatively inferior quality of those, and the losses/ illegal usage of electricity give extra burden for the industry facilities.

10. Efficient utilization of inputs (M): Due to the rapid change and development in technology today, the facilities have to operate their labor force, machinery, material, raw material and capital sources efficiently and effectively (Tekin, 2014). According to the representatives surveyed, the utilization of inputs such as electricity, water, fuel and machinery are below efficiency level in İzmir.

11. Technology level (H) : Some improvement in R&D has been reached in food sector when compared to the agricultural sector.

12. Structure of capital (M): The scarcity of capital, which remains to be one of Turkey's main economical problems, is valid for the firms operating in the dried fruit sector as well.

Figure 2. Competitiveness of Dried Fruit Sector in İzmir According to the Porter’s Diamond Model



B. Demand Conditions (Medium)

1. Level of domestic demand (L): The domestic demand for dried fruit products is credited as low.

2. Level of foreign demand (H): Due to higher international demand, the firms operating in dried fruit sector position themselves according to the international demands.

3. Proximity to the EU market (H): İzmir has an advantage because of its proximity to the EU countries. The products can be submitted to the EU markets in short notice.

4. New markets (M): Far East is emerging in the newly developing markets, but the desired level has not been achieved yet.

5. Near markets (M): Grape prices in Iran are low, because of that the demand of bordering countries has medium level.

6. National demand increase rate (L): According to the representatives, the national demand is credited as low.

7. International demand increase rate (M): Due to the World economical crisis the international demand for dried fruit has lost its once high positions.

C. Firm Strategy, Structure and Rivalry (Medium)

1. Research and development (L): The resources deployed to R&D are very low.

2. Utilizing efficient management techniques (M): The expectations of the customers have evolved immensely. Perception of these expectations correctly is a must for the management. Team work, brainstorming, creativity techniques, time and stress management are some of the management techniques (Alpugan et al, 1997).

3. Value added produced by the sector (H): The Turkish food sector has no raw material needs from other countries, owing to that fact this sector is one of the most important added value creating sectors in Turkey.

4. Product variety of the sector (H): Parallel to the product variety and the needs of international customers the product variety of the sector is diversified.

5. Contracted farming applications (M): A considerable rise in the contracted farming applications occur in the recent years, but no significant statistical data is present to prove this fact. The firms appear to form related departments in their organizational structures and are willing to have these types of production cooperation.

6. Rate of capacity using (M): The dried fruit facilities in İzmir cannot deploy their capacities in full scale. The main reason for that is the inadequacy of equipment in the cold storage facilities for long periods of storage.

7. Brand preference (M): Most of the firms use their own trade marks in the export.

8. Productivity level of the firms (M): Productivity is the indicator of how successfully the factors of production were used in production unit or in economy (Gerşil, 2007). The productivity of the examined firms was evaluated as medium by the representatives surveyed.

9. Strategy related to food safety and quality (M): The governmental and private studies on these issues have increased gradually. However, it is still below the desired level.

D. Related and Supporting Industries/ Organizations (Medium)

1. Non-governmental organizations (M): Most of the organizations are organized by the Federation of The Food Organizations.

2. Governmental organizations and authorities (M): The relations of the sector with public governmental organizations and authorities, such as Agricultural Provincial Directorate and Chamber of Agriculture, are lower than the desired level.

3. Local authorities (M): The relations of the sector with public authorities, such as municipalities, are lower than the desired level.

4. Cooperation between agriculture and industry (H): There is an important and well-functioning coordination between food and agriculture sectors.

5. Relation of the industry with energy sector (L): The energy usage in İzmir is 54 % higher than the average energy usage in Turkey. When geothermal and wind energy sources are taken into account, the potential of the province in

renewable energy sector is obvious. Solar energy is another source to be deployed in the area, besides the province has high potential in using biomass energy (İZKA, 2009).

6. Relation of the sector with transportation sector (H): İzmir has well developed land, sea and air transport networks. İzmir port is the third largest in Turkey coming after İstanbul and Mersin according to the number of incoming and departing vessels.

7. Relation of the sector with universities (M): There is a weak cooperation between the universities and the firms operating in the food sector in İzmir when compared to the international rivals.

8. Relation of the industry with suppliers (H): A well-functioning coordination among the farmers, industrialists, shippers, retailers and customers was developed.

9. Relation of the sector with organizations that supply food safety and quality system documentation (M): One of the key variables in food export of Turkey takes into consideration the documents of food safety and quality assurance system. When these documents are supplied, an important competition advantage comes by. However, particularly low and medium scale firms do not have these documents.

E. Government Factor (Medium)

1. Governmental incentives intended for export (M): The governmental incentives for export are composed of R&D, environment-market survey and international fair aids.

2. Governmental incentives intended for investment (L): The state incentives for investments are exemption from custom's tax, discount in energy expenses, allocation of land and reductions in investments. However, İzmir, considered as being one of the developed regions, cannot benefit from these incentives.

3. Taxes accountable to the sector (L): Higher tax rates in this sector, compared to the other sectors, decrease the level of international competitiveness.

4. Food safety control mechanism (M): Government should improve the control mechanism and supply highly competent labor on this issue.

Conclusions

According to the results, the competitiveness level of dried fruit sector in İzmir was detected as medium. The agricultural production potential in İzmir is high, and the quantity of the variety and the quality of the products are adequate. However, both the state and the firms should provide knowledge transfer to producers and they should also facilitate the input supply.

Increase of electrical energy and fuel prices is an important problem. The state implements a discount for the energy expenses in the industrial sector. However, İzmir is considered as a developed region, for that reason it cannot benefit from these discounts. As a recommendation to the state, a certain amount of electrical energy or fuel can be supplied free of charge the price of, which is equal to the worth of the firm's products produced for export. Hence, appropriate technological precautions might be considered to increase efficiency and save energy.

When technological potential is considered, the facilities operating in dried fruit sector are at a competitive level regarding to international markets. The international market potential of these firms, that is principally focused on export, should be enhanced and by assuring the regularity in export new markets should be created. In order to establish new markets industrialists, exporters and the state should collaborate.

The procedure of exportation process, that shows an integrated structure, is composed of complex steps, and each step is accomplished by a different public organization. As a result, the confidence of the exporter to the public organization becomes questionable and it becomes harder to follow an efficient export policy.

Government, that was mentioned as an external factor in the Diamond Model, due to high tax rates, deficiencies in control, complex legal structure and bureaucracy, negatively affect the sector. Despite the fact that government has been placed as a factor that has direct influence on the competition indirectly through other factors by Porter, it was concluded that the government has direct influence on the competition. Especially in the developing countries like Turkey the position of the government has a deep effect for the economy.

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