

## Pistachio Export Development Strategies in Kerman Province, Iran

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**Abstract:** The historical study of pistachio exports shows that they constitute a major share of non-oil exports. In addition, pistachios exports need to recognize the internal and external factors that affect the trend of pistachio exports, and, furthermore, strategic planning is required. In this study, by using a measuring method, the strengths, weaknesses, opportunities and threats were identified in the form of a SWOT Table. To design the pistachio export development strategies for Kerman the presented strategies and the result of quantitative strategic planning matrix were considered, and market development strategies were introduced as the main and most beneficial strategies for pistachio. In addition, Kerman pistachio exports, for achieving success in global markets, should follow conservative strategies. Most of the conservative strategies including market development were determined by the position assessment matrix and strategic action (SPACE).

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**Key word:** SWOT analysis, pistachio exports, strategy implementation, Kerman pistachio

### Introduction:

Pistachio is one of the agricultural products that are synonymous with the country of Iran. Furthermore, its production has a long historical background in the country, having been cultivated and exploited for millennia. Self-grown and wild forests of pistachio in the north-eastern region of Iran and adjacent areas of Turkmenistan and Afghanistan have a tremendous history and it is supposed that the pistachio tree has been planted and domesticated in Iran for about 3000 – 4000 years (Panahi, 2002).

Agricultural products comprise the major share of Iran's non-oil exports. Among the agricultural products, pistachio is very important, being the second major export good after hand-made carpets. Some studies have been carried out concerning the export of pistachio and pistachio export development strategies. These include:

Sedaghat (2008) conducted a study about the growth of pistachio and its effective factors on the competitive capability of Iranian pistachio in the global market. In this study, the exponential trend models, market stable share and time-series data related to the years of 1991-2003 were used. The results indicate that the growth rate of the area under cultivation is meaningful and is equal to 5/2%. While the growth rate of production, value of export was not significant, market distribution and the competitive effect played an important role in changing the rate of Iran's pistachio export between 1996 and 1999. However, the effect of product composition and market distribution were the most important factors in changing the rate of pistachio exports between 2000 and 2003 (Sedaghat, 2008).

Sedaghat (2008) analysed the export pattern and competitiveness of Iran's pistachio in the global market. The results of his study show that the exporting to Europe is the most efficient marketing path for Iran's pistachio, and exporting to central Asia and Arab countries has a higher efficiency in comparison with the other markets. Between 1996 and 2003, the United Arab Emirates was the most stable export market for Iran, with Russia and Germany following. In the years of 1996 to 1999, the changes in the export value were negative, whereas in 2000-2003 they were positive. The main reason for these changes was the effect of market distribution. His study also shows that the price of pistachio in the markets of Iran and the U.S.A. do not show an adequate correlation, therefore, it seems that Iran's Internal pricing system does not have adequate efficiency (Sedaghat, 2008).

Sedaghat and Surya Prakash(2006) studied the production and marketing constraints of Iran's pistachio. The results showed that from the viewpoint of producers, agricultural water shortage is in first place, inappropriate market structure, price fluctuations and producer's low prices are commonly in second place and chemical fertilizer shortage is in third place. However, from the viewpoint of exporters and producers, the first problem relates to the existence of Aflatoxin, inappropriate and changing policies of the government, and inadequate supply of products to market (Sedaghat & Suryaprakash, 2006).

Sedaghat and Surya Prakash (2006b) in addition to the presentation of the most important problems in the available system studied the possibility of a reciprocal contractual management system for Iran's pistachio marketing and production. They

believe that the current system of production management and pistachio market has low efficiency. Using the reciprocal contractual system could lead to promoting the production efficiency and improving the quality of pistachio production. In addition, by applying the new system the farmers' income and producers received price would improve (Sedaghat & Surya, 2006).

In this study, by using the results of the presented studies, in addition to enumerating the strengths and weaknesses, and opportunities and effective threats on pistachio exports, as well as the presentation of pistachio export development strategies, we provide a quantitative strategic planning matrix.

**Methodology:**

In this study, the descriptive and measurement method was used. Initially, by studying the internal factors (strengths and weaknesses) and external factors (opportunities and threats), a list of strengths, weaknesses, opportunities and threats were determined, then, through questionnaires recording the opinions of the Kerman pistachio exporters, the ranking and

weighting of these internal and external factors were studied.

Subsequently, by extracting the Tables of the internal factors analysis summary (IFAS) and external factors analysis summary (EFAS), the SWOT model was designed and the appropriate strategies determined.

|                     |                      |                    |
|---------------------|----------------------|--------------------|
| Weakness point<br>W | Strengths point<br>S |                    |
| WO                  | SO                   | opportunities<br>O |
| WT                  | ST                   | threats<br>T       |

Source (Daivid, 2006)

For determining the sample size the Sharp-Cochran method was used, subsequently, by using a random sampling method, a questionnaire was completed from the statistical universe.

Sharp-Cochran formula:

$$n = \frac{Nt^2pq}{Nt^2 + t^2pq}$$

N= population size

n= sample size

t= 1.96

P= the possibility of property existence (95%)

q= the possibility of property non-existence

d=sampling error (0.05)

By considering the Sharp-Cochran formula, 31 exporters were chosen as a population size.

**Findings:**

**Internal factors affecting on Kerman pistachio exports**

By studying the internal factors the basic weaknesses and strengths of the firms' duty units can

be determined, which provide the list of the most important and effective internal factors for the firms to be competitive. Thus, the table of internal factors analysis (IFAS) is provided (Daivid, 2006).

**Table 1: The summary of internal factors analysis of pistachio export (IFAS)**

| index   | Score | Rank | Weight | Strengths points |
|---|-------|------|--------|------------------|
| 1- The existence of comparative advantage in pistachio export                     | 0.151 | 2.85 | 0.053  |                  |
| 2- The existence of relative share of export                                      | 0.132 | 2.60 | 0.051  |                  |
| 3- The productive capacity of country (physical factors such as water, soil, ...) | 0.137 | 3.20 | 0.043  |                  |
| 4- Entrepreneurship   | 0.168 | 3.50 | 0.048  |                  |
| 5- High profitability   | 0.138 | 3.30 | 0.042  |                  |
| 6- Comparative quality with foreign productions                                   | 0.160 | 3.20 | 0.050  |                  |
| 7- High nutritive value   | 0.153 | 2.95 | 0.052  |                  |
| 8- A vast background of pistachio export  | 0.111 | 2.86 | 0.039  |                  |
| 9- Market's need for production   | 0.110 | 3.15 | 0.035  |                  |
| 10- Possibility of providing foods and new material from pistachio                | 0.105 | 3.10 | 0.034  |                  |
| 11- Low production costs of the competitors                                       | 0.117 | 3.80 | 0.031  |                  |
| 12- The existence of surplus capacity to the province's need                      | 0.094 | 2.95 | 0.032  |                  |

|  |       |      |       |                 |
|--|-------|------|-------|-----------------|
| 1- Liquidity shortage  | 0.162 | 3.25 | 0.050 | Weakness points |
| 2- Export organizations' weaknesses                                    | 0.118 | 3.12 | 0.038 |                 |
| 3- Inappropriate packaging and lack of mechanized packing system       | 0.164 | 3.17 | 0.052 |                 |
| 4- Lack of strategic planning for cultivation and world trade          | 0.109 | 2.80 | 0.039 |                 |
| 5- Non-utilization of successful exporter countries experiences        | 0.108 | 3.50 | 0.031 |                 |
| 6- Processing industry's weaknesses                                    | 0.142 | 3.48 | 0.041 |                 |
| 7- Inefficiency of available infrastructure (storage, cold storage...) | 0.159 | 3.80 | 0.042 |                 |
| 8- Lack of standardization in particular pistachio                     | 0.116 | 2.90 | 0.040 |                 |
| 9- Contamination of products with Aflatoxin                            | 0.154 | 3.60 | 0.043 |                 |
| 10- Traditional and non-scientific presence in target market           | 0.129 | 2.95 | 0.044 |                 |
| 11- Lack of variation in export products                               | 0.146 | 3.85 | 0.038 |                 |
| 12- Weaknesses of suitable and efficient information system            | 0.117 | 3.67 | 0.032 |                 |
| Total  | 3.20  | ---- | 1     |                 |

The importance (weight) of effective indexes on pistachio exports and exporters' reaction to the mentioned factors (rank) were studied by 31 Kerman exporters. (Total weight equals 1 and the rank criterion is from 1-5).

Weights and ranks in a questionnaire with the ranges of, very low, low, average, high and very high. By considering the Table 1, the number of strengths of Iran's pistachio exports is 12 and the number of weaknesses of Iran's pistachio exports is also 12. Among the strengths, the highest score of importance is related to the "existence of relative advantages in pistachio production" with the weight of 0.053 and rank of 2.85, and the lowest score of importance is related to the "low production costs of the competitors" in which its weight is 0.031 and its rank is 3.80. Also, among the weaknesses, the highest importance score is related to "inappropriate packaging and lack of mechanized packaging system" with a weight of 0.052 and rank of 3.17. The lowest importance score is related to "non-utilization of successful exporting countries, experience" with the weight of 0.031 and rank of 3.50. By considering (3.20), generally, it can be said that the reaction of exporters to the weaknesses and strengths in pistachio export was higher than average (Table1).

#### Effective external factors on Kerman pistachio exports

The aim of this study is to provide a final list of opportunities that can be used and also a list of

threats that can be avoided. Strategists can evaluate economic, social, cultural, and ecological factors, political, governmental, environmental, legal, technological factors and competitive information by using an external factors analysis summary matrix (EFAS) (Daivid, 2006).

Effective environmental factors on Kerman pistachio exports (opportunities and threats of external environment) along with the rate of significance (weight) and the reaction of exporters to the mentioned factor (rank) were determined by the statistical sample (Total weight equals 1 and rank scale equals 1 to 5). By considering the calculated mode, among these opportunities, the highest importance score is related to the "existence of universities and higher education centres relevant to the agricultural section" with the weight of 0.053 and rank of 3.12, however, the lowest importance score is related to "the settling of business's advisors in the target countries" in which its weight is 0.035 and its rank is 2.81. In addition, among the threats, the highest importance score is related to the "available bureaucracy in customs, airports,....." in which its weight is 0.055 and its rank is 3.80, and the lowest importance score is related to the "government's excessive office in economy" with a weight of 0.039 and rank of 2.5.

By considering the total score (2.89), generally, it can be said that the reaction of exporters to the environmental opportunities and threats of pistachio exports has been less than average (Table2).

**Table 2: The Summary of External Factors Analysis of Pistachio Export (EFAS)**

| index   | Score | Rank | weight | opportunities |
|---|-------|------|--------|---------------|
| 1- Internal and external exhibition                               | 0.112 | 2.81 | 0.040  |               |
| 2- The governments' attention to the non-oil exports              | 0.153 | 3.4  | 0.045  |               |
| 3- Develop ports for expanding trade relations and goods' transit | 0.165 | 3.3  | 0.050  |               |

|  |       |      |       |  |         |
|--|-------|------|-------|--|---------|
| 4-Proximity to the markets of central Asia, the Middle East and the Persian Gulf                     | 0.166 | 3.2  | 0.052 |  |         |
| 5- Possibility of investment in the private sector   | 0.149 | 3.11 | 0.048 |  |         |
| 6- Universities and higher educational centres relevant to the agricultural section                  | 0.165 | 3.12 | 0.053 |  |         |
| 7- Export incentives   | 0.133 | 3.5  | 0.038 |  |         |
| 8- Setting business advisors in target countries   | 0.098 | 2.81 | 0.035 |  |         |
| 9-Government supportive policies from internal productions   | 0.121 | 2.90 | 0.042 |  |         |
| 1- Problems resulting from bank credit   | 0.119 | 2.66 | 0.045 |  | threats |
| 2- Bureaucracy in the customs, airport...  | 0.209 | 3.8  | 0.055 |  |         |
| 3- Competitors from abroad   | 0.189 | 3.5  | 0.054 |  |         |
| 4- Competitors' advertising about Iran's pistachio pests in and out of the country                   | 0.153 | 3.4  | 0.045 |  |         |
| 5- Multiplicity and contradiction in expert instructions   | 0.137 | 2.6  | 0.053 |  |         |
| 6- Production's frostbite and drought, and severe shortage of water resources                        | 0.148 | 3.3  | 0.045 |  |         |
| 7- Government's excessive office in economy  | 0.097 | 2.5  | 0.039 |  |         |
| 8- Competitiveness ability reduction in global markets due to real foreign exchange's rate reduction | 0.105 | 2.4  | 0.044 |  |         |
| 9- Unhealthy competition of exporters in target markets  | 0.132 | 2.88 | 0.046 |  |         |
| 10- Weakness of banking system in developing the commercial activities of the province               | 0.095 | 2.5  | 0.038 |  |         |
| 11- High interest of bank facilities   | 0.099 | 2.21 | 0.045 |  |         |
| 12- High fluctuations of export goods  | 0.097 | 2.31 | 0.042 |  |         |
| 13- Lack of capable and experienced national institution in export                                   | 0.147 | 3.2  | 0.046 |  |         |
| Total  | 2.98  | --   | 1     |  |         |

#### Pistachio export development strategies design by using SWOT model

In the SWOT Matrix the balance and equilibrium is established between the firm's main external and internal factors. Strategists can present four types of strategy by using this matrix: SO strategies, WO strategies, ST strategies and WT strategies. In implementing SO strategies, the organization can exploit the external opportunities by using the internal strengths points. The aim of WO strategies is that a firm using the opportunities in an external environment tries to improve the internal weakness points. By implementing the ST strategies firms try to reduce the consequent effects of the threats in the external environment. The firms that implement WT strategies show a defensive state and their aim is to reduce the internal weakness points and avoiding the threats of an external environment (Daivid, 2006).

#### Providing a quantitative strategic planning matrix for pistachio export

For implementing the strategies a quantitative strategic planning matrix, (QSPM), is used as an analytical framework. By using this method, the various strategies or the best strategies can be determined, objectively. The process of providing a quantitative strategic evaluating matrix includes six stages, as follows (Daivid, 2006).

First stage- Opportunities, threats, weaknesses and strengths are written in the right hand column of the quantitative strategic planning matrix.

Second stage- Coefficient and weight is given to each of the external and internal factors in which they have a major role in firm's success. These coefficients are from zero (insignificant) to 1 (very important). Coefficients show the relative importance of one factor (In terms of firm's success in a relevant industry)

Third stage- The strategies obtained from the SWOT matrix are written in the top row of the quantitative planning matrix. If it is possible, these strategies should be contradictory.

Fourth stage- The attractiveness scores are determined. These are the numerical values that show the attractiveness of each strategy in a set of strategies. For determining the attractiveness score, the internal and external factors should be studied and whether these factors play a role in the process of strategy selection or not? The attractiveness score is in this form: 1= without attraction, 2= somewhat attractive, 3= reasonable attraction, 4= very attractive. If none of these factors plays a role in the process of strategies selection, then the attractive score should not be awarded.

Fifth stage- Total attractive score is calculated.

Sixth stage- Total attractive score is calculated. For this purpose, the total attractive score is calculated from each column, with the high scores indicating the strategies' attraction, by considering all the internal and external factors that can affect the strategic decisions.

The quantitative strategic planning matrix of pistachio export is as follows:

**Table 3: SWOT Matrix of Pistachio Export**

|   |   |   |
|---|---|---|
| <p><b>Internal factors</b></p>  | <p><b>Strengths (S)</b></p> <ol style="list-style-type: none"> <li>1- The existence of comparative advantage in pistachio export</li> <li>2- The existence of relative share of export</li> <li>3- The productive capacity of country (physical factors such as water, soil, ...)</li> <li>4- Entrepreneurship</li> <li>5- High profitability</li> <li>6- Comparative quality with foreign productions</li> <li>7- High nutritive value</li> <li>8- A vast background of pistachio export</li> <li>9- Markets need for production</li> <li>10- Possibility of providing foods and new material from Pistachio</li> <li>11- Low production costs to the competitors</li> <li>12- The existence of surplus capacity to the province's need</li> </ol> | <p><b>Weaknesses (W)</b></p> <ol style="list-style-type: none"> <li>1- Liquidity shortage</li> <li>2- Export organizations' weaknesses</li> <li>3- Inappropriate packaging and lack of mechanized packing system</li> <li>4- Lack of strategic planning for cultivation and world trade</li> <li>5- Non-utilization of successful exporter countries experiences</li> <li>6- Processing industries' weaknesses</li> <li>7- Inefficiency of available infrastructure (storage, cold storage...)</li> <li>8- Lack of standardization in particular pistachio</li> <li>9- Contamination of products with Aflatoxin</li> <li>10- Traditional and non-scientific presence in target market</li> <li>11- Lack of variation in export products.</li> <li>12- Weaknesses of suitable and efficient information system.</li> </ol> |
| <p><b>External factors</b></p>  | <p><b>SO strategies (offensive)</b></p> <p>Increasing exports to the Persian Gulf and central Asia<br/>S11, S2, S1, S3, S4, S5</p> <p>Encouraging the inventors of agricultural Technologies (Market development)<br/>S1, S3, S11, O1, O2, O4,</p> <p>Employing the exports for producing high quantity production.<br/>S1, S2, S6, S9, O2, O4, O5</p> <p>Introducing products to the markets (penetrate the market).<br/>S1, S3, S8, O1, O3, O4, O5</p> <p>Customs facilities for the exporters of packaged pistachio appropriate to the modern Technology (Market development).<br/>S1, S2, O1, O4, O7, O9</p>  | <p><b>WO strategies (cautiously)</b></p> <p>Variation in the pistachio export productions (product development).<br/>W2, W3, W11, W12, O1, O4, O6</p> <p>Increasing and improving the research and development (R&amp;D) activities (Market development).<br/>W2, W4, O1, O2, O9</p> <p>Implementing the pistachio strategic planning in the field of pistachio export and cultivation (Market development).<br/>W2, W4, O2, O4, O8</p> <p>Developing the processing industries in Kerman (product development)<br/>W2, W3, W6, W11, O2, O4</p> <p>Information technology and e-commerce development (Market development).<br/>W2, W3, W5, O3, O4, O8</p>   |
| <p><b>Opportunities (O)</b></p> <ol style="list-style-type: none"> <li>1- Internal and external exhibition</li> <li>2- The governments' attention to non-oil exports</li> <li>3- Develop ports for expanding trade relations and goods' transit</li> <li>4- Proximity to the markets of central Asia, the middle east and Persian Gulf</li> <li>5- Possibility of investment in the private sector</li> <li>6- Universities and higher educational centres relevant to the agricultural section</li> <li>7- Export incentives</li> <li>8- Setting business advisors in target countries</li> <li>9- Government supportive policies from internal productions</li> </ol> |   |   |

|   |  |  |
|---|--|--|
|   |  |  |
| <b>Treatments (T)</b><br>1- Problems resulting from bank credit<br>2- Bureaucracy in the customs, airport...<br>3- Competitors from abroad<br>4- Competitors' advertising about Iran's pistachio pests in and out of the country<br>5- Multiplicity and contradiction in export instructions<br>6- Production's frostbite and drought, and severe shortage of water resources<br>7- Government's excessive office in economy<br>8- Competitiveness ability reduction in global markets due to real foreign exchange rate reduction<br>9- Unhealthy competition of exporters in target markets<br>10- Weakness of banking system in developing the commercial activities of province<br>11- High interest of bank facilities<br>12- High fluctuation of export goods<br>13- Lack of capable and experienced national institution in export | <b>ST strategies (competitive)</b><br>Increasing control over the distribution system (forward integration).<br>S1, S2, S9, T2, T3, T6, T9<br><br>Creating and expanding the free trade zones (vertical integration to top).<br>S1, S2, S3, S8, T2, T3<br><br>Establishing laboratories for determining the bacterial and fungal contamination.<br>S1, S2, S10, T3, T4 | <b>WT strategies (defensive)</b><br>Increasing and improving marketing activities (penetrate the market)<br>W2, W3, W4, T3, T4<br><br>Promoting packaging Technology (penetrate development).<br>W2, W3, W11, T1, T2, T9<br><br>Following the global industrial standards (penetrate development).<br>W2, W4, W8, T3, T8, T9<br><br>Using export models of successful exporting countries (Market development).<br>W2, W4, W5, T3, T6, T8, T13 |

**Table 4: Quantitative strategic planning matrix (QSPM) of Kerman pistachio**

| Factor determining success   | Coefficient | Strategies under study |      |      |      |      |      |
|--|-------------|------------------------|------|------|------|------|------|
|  |             | 1                      |      | 2    |      | 3    |      |
| Opportunities  |             | AS                     | TAS  | AS   | TAS  | AS   | TAS  |
| Universities and higher educational centres relevant to the agricultural section | 0.15        | 3                      | 0.45 | 4    | 0.6  | 2    | 0.3  |
| Proximity to the markets of central Asia, the Middle East and Persian Gulf       | 0.15        | 3                      | 0.45 | 3    | 0.45 | 2    | 0.3  |
| Develop ports for expanding trade relations                                      | 0.08        | 3                      | 0.24 | 3    | 0.24 | ---- | ---- |
| Possibility of investment in the private sector                                  | 0.08        | ----                   | ---- | ---- | ---- | 1    | 0.08 |
| The governments' attention to the non-oil export                                 | 0.1         | 2                      | 0.2  | 3    | 0.3  | ---- | ---- |
| Threats  |             |                        |      |      |      |      |      |
| Bureaucracy in the customs, airport.....   | 0.13        | 4                      | 0.52 | 4    | 0.52 | 2    | 0.26 |
| Competitors from abroad  | 0.1         | 3                      | 0.3  | 4    | 0.4  | ---- | ---- |

|   |      |      |      |      |      |      |      |
|---|------|------|------|------|------|------|------|
| Multiplicity and contradiction in export institutions                       | 0.08 | 1    | 0.08 | 2    | 0.16 | 3    | 0.24 |
| Lack of capable and experienced national institution in export              | 0.07 | ---- | ---- | ---- | ---- | 1    | 0.07 |
| Production's frostbite and drought, and severe shortage of water resources  | 0.06 | 2    | 0.12 | 1    | 0.06 | 1    | 0.06 |
| <b>Strengths</b>  |      |      |      |      |      |      |      |
| The existence of comparative advantage in pistachio export                  | 0.15 | 1    | 0.15 | 4    | 0.06 | 3    | 0.45 |
| The existence of relative share of export                                   | 0.12 | 3    | 0.36 | 2    | 0.24 | 2    | 0.24 |
| Comparative quality with foreign productions                                | 0.08 | 2    | 0.16 | 1    | 0.08 | 1    | 0.08 |
| Entrepreneurship  | 0.08 | 1    | 0.08 | 1    | 0.08 | 2    | 0.16 |
| The productive capacity of country (physical factors such as water, soil, ) | 0.07 | ---- | ---- | ---- | ---- | ---- | 0.07 |
| <b>Weaknesses</b>   |      |      |      |      |      |      |      |
| Inappropriate packaging and lack of mechanized packing system               | 0.15 | 2    | 0.3  | 3    | 0.45 | 2    | 0.3  |
| Liquidity shortage  | 0.1  | 2    | 0.2  | 3    | 0.3  | 1    | 0.1  |
| Traditional and non-scientific presence in target markets                   | 0.1  | ---- | ---- | ---- | ---- | 1    | 0.1  |
| Contamination of products with Aflatoxin.                                   | 0.08 | 1    | 0.08 | 2    | 0.16 | ---- | ---- |
| Inefficiency of available infrastructure (storage, cold storage...)         | 0.07 | 1    | 0.07 | 1    | 0.07 | 2    | 0.14 |
| Total attractive score  | 1    |      | 3.76 |      | 4.91 |      | 2.97 |

1=Market penetration, 2= Market development, 3= Product development  
AS= Attractive score, TAS= Total Attractive score

By considering the quantitative strategic planning Matrix (QSPM) for pistachio, a Market development strategy with attractive score 4.91, is known as a more attractive strategy.

Appropriate strategies implementation.

Developing non-oil exports causes economic growth in developing countries and developed countries, and in this way, the payment deficits in these countries will be compensated. Government efforts for developing the exports can include the normal responsibilities of business such as research about the export markets, sales opportunities holding international exhibitions, establishment of export development office in relevant foreign countries and traditional forms of export development including tax incentives, foreign exchange subsidies, export special credits, export insurance, and export awards (Akhavy, 1995).

After studying the strengths and weaknesses and determining the Environmental factors (opportunities

and threats), in the SWOT model and using the quantitative strategic planning matrix (QSPM), the appropriate strategies for pistachio export developments are:

- Increasing exports to the Persian Gulf and central Asia (Market development).
- Encouraging the invention of agricultural technology (Market development).
- Customs facilities for the exporters of packaged pistachio appropriate to the modern Technology (Market development).
- Increasing and improving research and development (R&D) activities (Market development).
- Implementing strategic planning in the field of pistachio export and cultivation (Market development).

- Information technology and e-commerce development (Market development).
- Using export models of successful exporting countries (Market development).

|                      |                         |        |
|----------------------|-------------------------|--------|
| 5                    | Working capital         | 3      |
| 6                    | Liquidity               | 2      |
| 7                    | Easily in out of system | 3      |
| 8                    | Risk at work            | 2      |
|                      | Inventory turnover      |        |
| <b>Score average</b> |                         | 24/8=3 |

Also, the other presented strategies in the SWOT model for pistachio export development are:

A) SO strategies (offensive)

- Employment the exports for producing high quality production (product development).
- Introducing products to the markets (penetrate the market).

B) ST strategies (competitive).

- Increasing control over the distribution system (forward integration).
- Creating and expanding the free trade zones (vertical integration to top).
- Establishing laboratories for determining the bacterial and fungal contamination.

C) WO strategies (cautiously).

- Variation in the pistachio export production (product development).
- Developing the processing industries in Kerman (product development).

D) WT strategies (defensive).

- Promoting packaging Technology (penetrate development).
- Following the global industrial standards (penetrate development).

**Strategic action and position evaluation matrix (SPACE)**

A) Financial security determinants (FS).

|   | <b>factors</b>                          | <b>score</b> |
|---|---|--------------|
| 1 | Capital output                          | 3            |
| 2 | Imposing pressure (financial leverage). | 4            |
| 3 |   | 6            |
| 4 | Capability of changing to money         | 4            |

B) Environmental stability determinants (ES)

|                      | <b>factors</b>                               |           |
|----------------------|--|-----------|
| 1                    | Change in Technology                         | -2        |
| 2                    | Inflation rate                               | -2        |
| 3                    | Change in demands                            | -2        |
| 4                    | Competitive degree in product                | -1        |
| 5                    | Available barriers to enter the organization | -3        |
| 6                    |  | -2        |
| 7                    | Competitive push in organization             | -2        |
|                      | Demand elasticity against price              |           |
| <b>Score average</b> |  | -14/7= -2 |

C) Factors determining Strength (IS)

|                      | <b>factors</b>  | <b>score</b> |
|----------------------|---|--------------|
| 1                    | Organization potential growth                         | 3            |
| 2                    | Organization potential profit                         | 3            |
| 3                    | Financial stability of organization                   | 2            |
| 4                    | Necessary skill in technology                         | 3            |
| 5                    | Use of recourse                                       | 4            |
| 6                    | Capital density                                       | 4            |
| 7                    | Ease of entry to the organization                     | 2            |
| 8                    | Productivity & resource usage                         | 3            |
| 9                    | Other (flexibility against the changes in the market) | 3            |
| <b>Score average</b> |   | 27/9=3       |

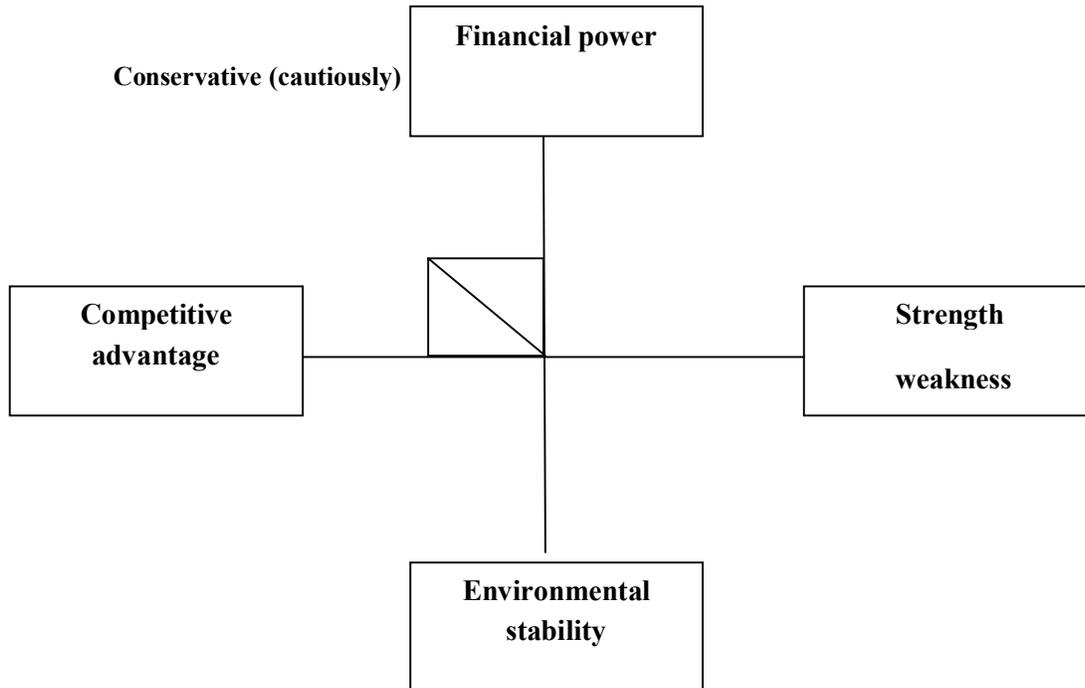
D) Factors determining Competitive advantage (CA)

|                      | <b>factors</b>                                 | <b>score</b> |
|----------------------|--|--------------|
| 1                    | The share of pistachio export from the country | -3           |
| 2                    |  | -3           |
| 3                    | Service quality                                | -5           |
| 4                    | Educational courses' cycles                    | -5           |
| 5                    | Replacement cycle in pistachio export process  | -4           |
| 6                    |  | -4           |
| 7                    | Loyalty  | -4           |
| 8                    | Using the competitive capacity                 | -4           |
|                      | Technology special knowledge                   |              |
|                      | Vertical integration                           |              |
| <b>Score average</b> |  | -32/8= -4    |

**Results:**

- The point is located on X axis.  
CA+IS= -4+3= -1
- The point is located on Y axis.  
ES+FS= -2+3= +1

Figure 1: evaluating position and pistachio strategies' action matrix



Pistachio exports in these conditions should perform a conservative strategy.

Organizations must keep their main competencies and not expose them self to the great risks. Most of the conservative strategies include penetrating the markets, market and product development, and homogenous diversities (David, 1999).

### Conclusion and Suggestions

Pistachio as an agricultural strategic product can play an important role in export development and foreign exchange for the country. According to the presented analysis in the form of the SWOT model and studying and evaluating the internal factors (strengths, weaknesses), and external factors (opportunities and threats), the pistachio export strategies were presented. By considering the presented strategies and the results of the quantitative strategic planning matrix, market development strategy is presented as the most advantageous strategy for pistachio. In addition, for achieving success in global markets Kerman pistachio exports should follow the conservation strategies. Most of the conservative strategies include market development as determined by the strategic action (SPACE) and position evaluation matrix.

As can be seen, the results obtained from the quantitative strategic planning matrix suggest that the market development strategy matches the results of the strategic action and position evaluation's matrix, which suggests conservative strategies, and endorses the

conservative strategies development and market development.

According to the results of this research, the following suggestions are presented for Kerman pistachio export development:

- Implementing the Kerman pistachio export strategic planning and presenting vision and mission.
- Providing special facilities to the agricultural graduates for their entrance to the manufacturing and pistachio export section.
- Preparing required facilities and equipment for developing the e-commerce and exchange facility.
- Establishing compulsory standards from the relevant organization for the standardization of production and packaging.
- Conducting research into the design of additional products and processing machines.
- Creating the required facilities for technology exporters.
- Reducing the in-bulk pistachio exports and moving towards packing based on international standards.

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