Evaluating the Present Situation and Suggesting Appropriate Strategies for Improving the Efficiency of Pistachio Distribution Channels of Kerman Province Using SWOT Model

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Abstract
This study attempted to assess the situation of Iranian pistachio and its export distribution channels. The main purposes of this study were to determine the most important strengths, weaknesses, threats and opportunities facing the distribution channels of export of pistachio in Kerman province and to suggest appropriate strategies for the current situation. For this purpose, an experimental approach was used; requirement data was gathered via interviews and questionnaires from pistachio exporters of Kerman province. Data analysis was carried out using one-sample t-test; assessment matrix of internal and external factors and the SWOT model were incorporated. Using the statistical t-test, the strengths, weaknesses, threats and opportunities of distribution channels of Kerman province’s pistachio were identified and then prioritized with relative weights of approved strengths, weaknesses, threats and opportunities. Then, with an analysis of SWOT, breakthroughs were devised to improve distribution channels of Kerman’s pistachio and finally based on the internal-external factors matrix, the current status of distribution channels of Kerman’s pistachio was defined and the best strategy for implementation was suggested. According to the results, the best strategy at present is a defensive WT one.

Keywords: Distribution Channel, Kerman pistachio, Opportunities, Strategy, Strengths, Threats, Weaknesses.

Introduction
Exports of agricultural products comprise main proportion of non-oil exports of the country. Moreover, agriculture has greater stability compared to other economic sectors of the country (Moghadas & Ali Shahi, 2007). Pistachio export has a unique importance in Iran; because of its vast cultivated area, creating job opportunities and foreign currency revenues. One important factor in suitable, timely and high-quality presentation of agricultural products is the distribution channel of the products. Choosing the desirable channel is a crucial decision for the management. Physical distribution of the goods has direct relation to their marketing decisions and pricing, and advertisement policies are totally dependent on distribution systems and sales agent channels. These distribution channels are a series of affiliated organizations charged with providing goods or services. Due to a lack of financial means for direct marketing of their products, this is done by middlemen, hence increasing the efficiency of product distribution in the target market. From economic perspective, the role of such middlemen is to supply the demanded products of the consumers, creating equilibrium between supply and demand loads of the market. The distribution channels are responsible for the transportation of goods from producers to consumers, filling the existing gap between them temporally, spatially and ownership wise.

In addition to this transportation, saving time and creating connections between goods’ owners and customers, a distribution channel is mainly responsible for:
- Collecting essential information from different sources like potential and current customers, competitors and other agents and active marketers.
- Negotiating with customers in an attempt to increase their required purchase incentives.
- Getting orders from major (wholesale) customers and transferring these orders to producers.
- Accepting a proportion of the risk in the distribution channels.
- Preparing necessary storage space for the storage and distribution of physical goods.
- Paying necessary costs from purchasers via banks and other financial institutions (Cutler, 1999).

Given the importance of Kerman province’s pistachio and the vital role of its distribution in marketing and since there has not been any studies done in relation with the distribution channels of this product, this study has a high degree of significance. It has been attempted in this study to assess strengths, weaknesses, threats and opportunities of distribution channels of exported pistachio of Kerman province using SWOT.

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1. The term SWOT is the abbreviation of the Strength, Weakness, Opportunity and Threat words.
Model. There have been limited studies related to the subject of this study, some of which are as follows:

Sedaghat (2000) conducted a research titled “a survey of pistachio marketing economy in Fars province”. The result of this study is indicative of the weaknesses of its marketing system and inefficiency of the market. Also, the lack of efficiency is more evident in dry pistachio market than that of fresh pistachio. The main reasons here are lack of suitable processing facilities and negligence of pistachio developers of marketing techniques and lack of appropriate cooperative organizations, whether state-owned or private.

MehrabiBoshrabadi (2002) in study titled “assessing influential factors on Iran’s share from the global pistachio markets”, suggest that factors such as “Iran’s share of global production”, “GDP of importer countries”, “deviation of currency rates from balanced value”, “commercial policies”, “commercial deviation coefficient” and “relative price of pistachio in the consumer market” are effective factors on Iran’s share from global markets of pistachio.

AbdollahiEzzatabadi (2002) did another study entitle of “assessing revenue fluctuations of Iranian pistachio developers”, found these fluctuations to be rather high with farmers being unable of predicting and tackling them. Analyzing the comprising factors involved in fluctuations of pistachio price showed that both these fluctuations and their effect-per- hectares are effective in creating revenue changes.

Hosseimpour and Chizari (2003) accomplished a study titled “assessing the influence of economic and currency policies on the structure of global markets of Iranian pistachio” the results illustrated that the closer the currency rate is to its balanced value and the less control exists on its trade, the more exclusive the structure of its global markets and the better it is for Iran to act as an independent enterprise in the markets.

Fereydunian et al. (2004) conducted a study named “the attitude of Graph theory towards management of distribution system in Fider marketing approach”. The results indicated that this approach is a quite suitable solution for the prevalent issue of improvisation, and with the analysis of the graph of a huge distribution network to several sub-graphs, it can be improvised and rearranged as simple as a relatively small network.

Torkamani and Tarazkar (2005) conducted another study titled “the effects of currency rate fluctuations on the pistachio export prices”. The results illustrated that currency rate fluctuations both in long and short term is the most effective factor on export price of pistachio. Moreover, this price is affected by the volume of export. There is also a negative meaningful relationship between domestic production and the export prices in short run.

Azizi and Yazdani (2006), reported in their study titled “assessing Iran’s pistachio exports: challenges and breakthroughs” that since 1993, Iran has approached an export strategy because of sensitivity and following policies of trade and production of pistachio. The stability of pistachio export revenues is a proof of this fact. However, among the exporting nations, the US hasa well-structured, better organized and more precise export policy than that of other rivals.

Najafi and Tarazkar (2006) uttered in their “prediction of the export volume of pistachio in Iran: the application of artificial neuro-network” that this neuro-network has a superior performance in comparison with others and ARIMA process as well and is able to calculate the export volume more precisely.

Biria and Jebelameli (2006) conducted a survey named “the factors effective in exports of pistachio, saffron and date in the non-oil exports of Iran”. The results of this study clarified that pricing policies have not had any positive influence on the revenues of non-oil exports. Thus, policies need to be adapted which encourage production and distribution of agricultural products as well as adding to their variability.

Sedaghat (2007) did a piece of research on “analyzing the growth and influential factors on competitiveness of Iran’s pistachio in international markets” the outcomes of which are indicative of the fact that the growth rate of the area under pistachio cultivation is significant at 5.2 percent. This is when the production growth rate and the volume of exports at the same time have not been meaningful. The effects of market distribution and competitiveness were tangible in alternating the export volume of the first period (1997-1999) while the effects of mixing products and market distribution were most tangible in the second period (2000-2003).

Tahamipour (2008) demonstrated in “assessing effective factors on the risks of pistachio development in Zarand” that the factors of human resources, area under cultivation, automation and insecticides, have positively influenced production risks and this influence was only meaningful in human resources.

The current study attempted to answer to following questions: 1) what are the most important opportunities of distribution channels of Kerman province’s pistachio? 2) What are the most important threats of distribution channels of Kerman province’s pistachio? 3) What are the most important strengths of distribution channels of Kerman province’s pistachio? 4) What are the most important weaknesses of distribution channels of Kerman province’s pistachio?
Materials and Methods

To achieve the main goals of this study, a mixed-method was used (experimental, descriptive-analysis). First, according to the conducted surveys on the domestic and external environment of exported pistachio of Kerman province, a list of 12 strengths, 10 weaknesses, 9 opportunities and 7 threats were identified. Following consultations with those involved in the industry (exporters of pistachio in the province), one-sample t-test was used to accept reject the strengths, weaknesses, opportunities and threats.

Then, in order to minimize the weaknesses and threats and to improve the strengths and opportunities related to Kerman province’s pistachio export, appropriate strategies were devised using the analytical SWOT model and the best strategy to be implemented was selected based on internal-external factors matrix for the current situation of pistachio distribution channels of Kerman province.

Since the notions incorporated in the research questions are at the nominal level, the Likert spectrum of quantitative-qualitative variables was used to measure them, while changing each of the indices and variables to ratio and interval levels (Table 1).

Data collection for testing the research hypotheses was done via questionnaires. Also, in this study, statistics and reports of organizations involved with trading, marketing and exporting of pistachio in Iran and Kerman province were used and the condition of pistachio distribution channels of Kerman province were assessed by using appropriate questionnaires.

Sample population and selection methods

The population is all of the 55 active exporters of Kerman province based on the estimations of Iran’s pistachio research institute.

The sampling method used in this study is Random Sampling, since all the exporters have an equal chance to participate in the study. If the sample population is “N” and the participants are “n” the chances of selection of every subject from the population to “n/N” (Azar & Momeni, 2005).

In order to determine sample volume, the Cochran equation was used. Based on the sample population, 35 questionnaires were sent to pistachio exporters of Kerman province that 33 of them being returned, hence, statistical analyses on data were based on this sample.

To determine the participants the following model is incorporated:

\[ n = \frac{NZ_{\alpha/2}^2P(1-P)}{E^2(N-1) + Z_{\alpha/2}^2P(1-P)} \]  
\[ Z_{0.025} = 1.96, \alpha/2 = 0.025, N = 55, \alpha = 0.05, P = 0.1, E = 0.5 \]

\[ n = \frac{55(1.96)^2(0.5)(0.5)}{(0.1)^2(54) + (1.96)^2(0.5)(0.5)} = 35 \]

Data analysis

According to opinion polls and the collected data, questionnaires were distributed and after collecting those, a one-sample t-test was used to accept reject the strengths, weaknesses, opportunities and threats.

Out of the 12 questions for strengths in the questionnaire, 2 questions were approved. Out of 10 Weakness questions, 7 were approved. 4 out of 9 opportunity questions and 6 out of 7 threat questions were also approved. In this study one-sample t-test were used because there is only one set of data here and this hypothesis was tested whether the sample belongs to a community with a certain mean or not. In other words, the mean of the sample in every question needs to be compared with the assumed mean (researcher’s claim).

In this test, zero hypothesis and null hypothesis are:

\[ H_0: M \leq m \]
\[ H_1: M \geq m \]

In this case, the rejection value is in the high continuum of distribution because the zero hypothesis was rejected only if the mean of the sample is higher than the determined value by far.

The process of assessing the internal and external organizational environment usually is referred to as SWOT. Using it, strengths and weaknesses in the internal environment of the organization and opportunities and threats of the external environment were analyzed. This analysis was based on the fact that an effective strategy will maximize strengths and opportunities, minimizing weaknesses and threats.

To identify the breakthroughs, first the strengths, weaknesses, opportunities and threats were analyzed with a look into internal and external factors based on SWOT matrix (Pears and Robinson, 2006).
Table 2. The extraction of strategies

<table>
<thead>
<tr>
<th>ST Strategies</th>
<th>SO Strategies</th>
<th>ST Strategies</th>
<th>SO Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;T&quot; Threats</td>
<td>&quot;O&quot; Opportunities</td>
<td>Strengths &quot;S&quot;</td>
<td>Weaknesses &quot;W&quot;</td>
</tr>
<tr>
<td>WT Strategies</td>
<td>WO Strategies</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Pearsand Robinson, 2006

Results

Internal Influential Factors’ Matrix (Strengths, Weaknesses) and their Relative Weights and Priorities.

External Influential Factors (Threats and Opportunities) and their Relative Weight and Priorities. The results of the questionnaire; Internal Influential Factors (Strengths, Weaknesses) with their priorities and relative weights were represented (Table 3).

Table 3. Internal influential factors' matrix (strengths and weaknesses)

<table>
<thead>
<tr>
<th>Weaknesses</th>
<th>Strengths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relative weight</td>
<td>Factor/ Priority rank</td>
</tr>
<tr>
<td>0.819</td>
<td>lack of continuous and systematic relationship between internal and external distribution channels</td>
</tr>
<tr>
<td>0.814</td>
<td>lack of information on target country’s distribution channels</td>
</tr>
<tr>
<td>0.793</td>
<td>lack of knowledge of environmental variables (economical, cultural, political and legal)</td>
</tr>
<tr>
<td>0.788</td>
<td>lack of trust of distribution channels in the health of Kerman’s pistachio as a result of bad ads</td>
</tr>
<tr>
<td>0.761</td>
<td>lack of sufficient cover by the current distribution channel</td>
</tr>
<tr>
<td>0.748</td>
<td>lack of possibility of continuous assessment of middlemen’s performance by producers</td>
</tr>
<tr>
<td>0.745</td>
<td>lack of flexibility of the distribution channel</td>
</tr>
</tbody>
</table>

Source: research findings

External Influential Factors (threats and opportunities) with their priorities and relative weights were represented (Table 4).
Suggesting strategies for improving distribution channels of Kerman’s pistachio using SWOT model. In this part the final matrix of a summary of breakthroughs for improving distribution channels of exported pistachio of Kerman province was represented (Table 5). Using this table a comprehensive pattern of the condition of distribution channels of pistachio can be yielded:

**Internal and External Factors’ Analysis Matrix**

The internal factors matrix analyzes the main strengths and weaknesses and the external factors matrix analyzes the main opportunities and threats facing the organization. To prepare an internal or external factors matrix, observatory judgments should be the basis of decision making and one should not deduct scientific methods as the only comprehensive, valuable and potent approach. To compile an internal factors matrix or an external factors matrix the following 5 stages should be taken into consideration (R. david, 2007).

1. After analyzing internal and external factors, the most important among them should be listed and the sum of these factors should be between 10 and 20 for every matrix. These factors for internal factors matrix should be conclusive of strengths and weaknesses of the organization and for the external factors matrix they should include opportunities and threats. In the internal factors matrix, first the strengths and then the weaknesses and in the external factors matrix first the opportunities then the threats should be listed.

2. Add coefficients to these factors, ranging from 0 (for unimportant) to 1 (highly significant). The assigned coefficients to any factor are indicative of its relative importance in the successfulness of the company in the target industry. The sum of all the coefficients used should be equal to one.

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**Table 4: External Influential Factors’ Matrix (Threats and Opportunities)**

<table>
<thead>
<tr>
<th>Threats</th>
<th>Opportunities</th>
</tr>
</thead>
<tbody>
<tr>
<td>T&lt;sub&gt;1&lt;/sub&gt;</td>
<td>Using personal capabilities and skills in distribution channels to increase the pistachio exports of Kerman province</td>
</tr>
<tr>
<td>T&lt;sub&gt;2&lt;/sub&gt;</td>
<td>Using encouraging mechanisms to create incentives in domestic distribution atmosphere</td>
</tr>
<tr>
<td>T&lt;sub&gt;3&lt;/sub&gt;</td>
<td>Creation of coalitions in distribution channels</td>
</tr>
<tr>
<td>T&lt;sub&gt;4&lt;/sub&gt;</td>
<td>Establishment of exclusive distribution agents of exported pistachio of Kerman province in target countries to better control the distribution channels and battle secondary sales of Iran’s pistachio by other competitors.</td>
</tr>
</tbody>
</table>

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Source: research findings
3. Assign a value between 1 and 4 to all these factors. In the internal factors matrix score 1 is indicative of fundamental weakness, score 2 shows minimal weakness, score 3 represents strength and score 4 is given for a major strength in the discussed factor. In the external elements matrix this number is indicative of the effectiveness of current strategies of the company in reacting to the discussed factor. Score 4 means that the reaction has been flawless while 3 is an indication of better-than-average reaction; score 2 standing for an average reaction and 1 representing a weak reaction.

4. To calculate the final score for any factor, multiply its score by its coefficient.

5. The sum of final scores for any factor then should be calculated to maintain the ultimate score of a company.
Regardless of the number of factors in the internal or external factors matrix, the sum of all final scores would be between 1 and 4 and the mean of these scores would be 2.5. If the final score for the internal factors is less than 2.5, it means that the organization has weaknesses regarding its internal factors and if it is above 2.5 it means that the organization has strengths in its internal factors. In the external factors matrix if this number reaches 4 it is indicative of superb reaction on the part of the organization regarding the external factors creating threats and opportunities and it shows that the organization is exploiting its opportunities successfully and minimizing the effects of the threats as well. Score 1 in this situation is a sign of the company not devising its strategies in a way to exploit its external opportunities or prevent threatening factors.

(FredR.david, 2007)

**Table 6. Analyzing matrix for internal factors effective on distribution channels of pistachio export**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Coefficient</th>
<th>Score</th>
<th>Total Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>High interest of major distribution channels in target countries in Kerman’s pistachio for its superior quality</td>
<td>0.14</td>
<td>4</td>
<td>0.56</td>
</tr>
<tr>
<td>Long history of cooperation between producers and middlemen</td>
<td>0.12</td>
<td>3</td>
<td>0.36</td>
</tr>
<tr>
<td>Lack of continuous and systematic relationship between internal and external distribution channels</td>
<td>0.10</td>
<td>2</td>
<td>0.20</td>
</tr>
<tr>
<td>Lack of information on target country’s distribution channels</td>
<td>0.10</td>
<td>2</td>
<td>0.20</td>
</tr>
<tr>
<td>Lack of knowledge of environmental variables (economic, cultural, political and legal)</td>
<td>0.09</td>
<td>1</td>
<td>0.09</td>
</tr>
<tr>
<td>Lack of trust of distribution channels in the health of Kerman’s pistachio as a result of bad ads</td>
<td>0.15</td>
<td>1</td>
<td>0.15</td>
</tr>
<tr>
<td>Lack of sufficient cover by the current distribution channel</td>
<td>0.12</td>
<td>1</td>
<td>0.12</td>
</tr>
<tr>
<td>Lack of possibility of continuous assessment of middlemen’s performance by producers</td>
<td>0.08</td>
<td>1</td>
<td>0.08</td>
</tr>
<tr>
<td>Lack of flexibility of the distribution channel</td>
<td>0.10</td>
<td>1</td>
<td>0.10</td>
</tr>
<tr>
<td>Total</td>
<td>1.00</td>
<td>16</td>
<td>1.86</td>
</tr>
</tbody>
</table>

**Table 7. Analyzing matrix for external factors effective on distribution channels of pistachio export**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Coefficient</th>
<th>Score</th>
<th>Total Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using personal capabilities and skills in distribution channels to increase the pistachio exports of Kerman province</td>
<td>0.10</td>
<td>2</td>
<td>0.20</td>
</tr>
<tr>
<td>Using encouraging mechanisms to create incentives in domestic distribution atmosphere</td>
<td>0.11</td>
<td>1</td>
<td>0.11</td>
</tr>
<tr>
<td>Creation of coalitions in distribution channels</td>
<td>0.13</td>
<td>1</td>
<td>0.13</td>
</tr>
<tr>
<td>Establishment of exclusive distribution agents of exported pistachio of Kerman province in target countries to better control the distribution channels and battle secondary sales of Iran’s pistachio by other competitors</td>
<td>0.09</td>
<td>1</td>
<td>0.09</td>
</tr>
<tr>
<td>Lack of proper distribution management (skilled staff, exact timetable, suitable distribution policies, etc.)</td>
<td>0.10</td>
<td>2</td>
<td>0.20</td>
</tr>
<tr>
<td>Lack of professional and experienced managers in the field of choosing suitable distribution channels</td>
<td>0.10</td>
<td>2</td>
<td>0.20</td>
</tr>
<tr>
<td>Traditional system of transportation from producer to distribution channels and its rising costs.</td>
<td>0.08</td>
<td>2</td>
<td>0.16</td>
</tr>
<tr>
<td>Lack of convenient access to middlemen.</td>
<td>0.08</td>
<td>2</td>
<td>0.16</td>
</tr>
<tr>
<td>Lack of exclusive pistachio distribution channels for Kerman’s pistachio in target markets</td>
<td>0.09</td>
<td>2</td>
<td>0.18</td>
</tr>
<tr>
<td>Secondary sales of pistachio from Kerman by competitors by distribution channels</td>
<td>0.12</td>
<td>2</td>
<td>0.24</td>
</tr>
<tr>
<td>Total</td>
<td>1.00</td>
<td>17</td>
<td>1.67</td>
</tr>
</tbody>
</table>

**Internal and external matrix**

This matrix is based on two main aspects: the sum of total scores in internal and external factors’ matrixes, which are shown on the horizontal and vertical axes respectively (Tables 6 and 7). It should be kept in mind that for any section of an organization a separate matrix of internal and external factors can be prepared and the conjunction of these two scores shows the present status of the industry based on which the appropriate strategy must be contemplated.

The following figure is the current condition of distribution channels of pistachio exports that shows the best strategy to execute is defensive strategy (Fig.1).
Discussion
According to the internal and external factors’ matrix, in the present situation of distribution channels of pistachio exports of Kerman, a defensive strategy (WT strategy) is the best possible way and its applied methods are as follows:
- analyzing and selecting a proper trafficking system to accelerate deliver and reduce costs
- holding domestic and international conferences about Kerman’s pistachio in order to nullify negative ads and have better knowledge of and relationship with exporters and domestic and foreign middlemen.

Applied recommendations
Finally, via analyzing the research findings, applied recommendationsto improve the condition of distribution channels of exported pistachio of Kerman province are offered below:
1. improving storage and trafficking systems.
2. strengthening the research structure of pistachio in the country to identify the complications and solving them.
3. issuance commercial id cards for exporters who possess enough scientific and practical information.
4. Accuracy control of measures for the quality of pistachio packaging.
5. active presence in international conferences in order to reduce existenthreats in pistachiotrade.

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