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Research Paper

Identification of Effective Factors on the Marketing of Medicinal Plants From the Viewpoint of Experts

[1]Ali Ehsan Faridi Vosough, [*2]Hossein Vazifeh Doost

[1]Master of Science (MSc), Department of Executive Management, Faculty of Economic and Management, Islamic Azad University, Science and Research Branch, Tehran, Iran

[2] Professor, Department of Executive Management, Faculty of Economic and Management, Islamic Azad University, Science and Research Branch, Tehran, Iran (Corresponding Author)*

*Corresponding Author: * Hossein Vazifeh Doost*

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ABSTRACT: *The aim of this study is to identify factors affecting the medicinal plants marketing from the viewpoint of experts. This study is a quantitative research. In terms of purpose this is a applied research. In terms of data collection method, the monitoring and control of variables and interoperability is analytical-correlation. This study also follows the logic of comparative research. According to the research time, this study is retrospective longitudinal. The statistical population consisted of 400 experts of medicinal plants Exporters Association of Tehran Province (N= 400). The number of 245 experts were interviewed with a simple random sampling using a questionnaire. To evaluate the validity of the study, the opinions of experts was used. Cronbach's alpha test is used to test the validity for different parts of questionair which between 0.87 to 0.93 was calculated. Data analysis was performed using SPSS version 18. Exploratory factor analysis as multivariate analysis and associated method, was used to classify the factors affecting the medicinal plants marketing. To extract components principal component analysis method was used using varimax rotation. In this model, factors affecting the medicinal plants marketing was summarized in 4 factors that those explained 76/79 percent of the total variance overall. This percent was found in the cost factoe (20/790%), product factor (18/632%), location and distribution channel (13/719%) and policies factor and activities to encourage (23/648%).*

Keywords: *medicinal plants marketing, cost factoe, product factor, location and distribution channel, policies factor and activities to encourage, medicinal plants Exporters Association of Tehran Province*

I. INTRODUCTION

The importance of non-oil exports and their role in economic growth and development of the country is always one of the important issues in Iran, which recognizes and influences the factors affecting non-oil exports can help to increase export. One of these non-oil exports, which has potential potential for development in our country, is medicinal plants (Kashfi Bonab, 2009).Medicinal plants have great importance in the treatment of diseases. To the extent that the researchers are looking for 21st Century drugs in plants, they believe that solvent of the future medical problem is plants. Nowadays, in many industrial countries, doctors prescribe medicinal herbs that are available at pharmacies and stores (World Health Organization, 2011).

Increasing the need for medication, adaptation of herbal medicines to the body, and the emphasis of the World Health Organization on the replacement of chemical drugs by herbal plants has led to an increase in the use and administration of medicinal plants. Also, side effects, cost, time of discovery and production of chemical drugs have increased the use of medicinal plants in the health and pharmaceutical industries (Dabbi et al., 2009).Despite the increasing tendency to medicinal plants and the market prosperity of these plants in the world, the position of these plants is still not favorable in preventing and treating diseases in some countries, including Iran (World Health Organization, 2011).According to the World Health Organization report, in 2007, 11 of the 193 member countries of the organization have developed policies and strategies to promote the use of

traditional drugs. However, the number of these countries was fourteen in 1986 (World Health Organization, 2010).

One of the indicators that indicates the market boom of a product is the volume of export and import of that product (Meftahizadeh & Naseri, 2009).

The volume of sales of medicinal plants in Iran between 1998 and 2002 is lower than those of the United States, Turkey, China, Germany and India. The sales of medicinal plants in Iran in 1998 were only $ 1.8 million, compared to $ 34 million in China, $ 13.9 billion in India, and $ 40 million in the United States is lower than. The sales growth rate in Iran between 1998 and 2002 was about 10%. While sales growth in India, Germany and China was over 40% (World Health Organization, 2010). Tan and Freathy (2014) conducted a research entitled "The behaivor and Traits of Traditional Chinese Traditional Therapists in Singapore." The results of their research showed that the price, quality and honesty of the seller in providing information to the customer are the most important factors in the decision making of customers in the purchase of stores. The results of this study showed that when people with serious illnesses use chemical drugs and advanced therapies to treat their illness, herbal medicines are used to maintain healthy and illnesses. Also, the increase of fake, non-sanitary and inferior quality of herbal medicines is the most important barrier that reduces the use of people from traditional medicine.

Sher et al (2013), in his research, entitled "Plant economic Observations of Some Vegetation Resources in Northern Pakistan," investigated the medicinal plants of northern Pakistan from an economic point of view. The results of their research showed that the lack of awareness of local people about the economic importance of medicinal plants caused damages to vegetation and improper production of herbal medicines. Understanding and insufficient knowledge of the market and the lack of support for the two sectors of this industry has caused a lot of damage to the trade of these plants and reduced the harvest and production of these plants. Also, the results of this study showed that the training of methods of diagnosis, collection and preservation of medicinal plants, as well as marketing and marketing methods of these plants can improve the market of Pakistan and maintanence of plant species.

Ramesh Kumar and Janagam (2011) concluded in their research entitled "Flower Marketing in Dhaka City" that there was a lack of storage facilities and therefore high losses, lack of transportation and marketing facilities, lack of marketable sellers, shortage of New flowers species and lack of knowledge of active farmers in flower production are the most important flower marketing problems in this region. Considering the problems presented and the importance of marketing and exports, this study seeks to investigate strategies to identify the effective factors in marketing, to take a positive step towards improving the marketing status of medicinal plants in Iran.

Research Methodology

The present research is based on numerical analysis of data in order to explain the reasons for changes in social phenomena is a quantitative research. It is considered as an applied research in terms of purpose. In terms of data collection, the level of monitoring and the degree of control of variables and the generalizability is the analytic-correlation type. it is carried out by survey method and using a questionnaire. Also, this research follows the logic of deductive research. In terms of research time, this research is retrospective and longitudinal type. The statistical population of this research was 400 experts of the Union of Medicinal Herbs Exporters (N =400). 245 of them were interviewed using simple random sampling method with questionnaire . In order to achieve the apparent and content validity of the questionnaire, the views of the professors of the commercial management department of the Islamic Azad University of Science and Research Branch and some of the staff of the distribution of medicinal plant exporters were used.

In order to determine the validity of the questionnaire, 30 questionnaires were distributed outside of the statistical population by performing a Pilot test. After collecting the questionnaires, the data were analyze using the SPSS software version 18 and Cronbach's alpha values were calculated to be 0.87 and 0.93. In order to analyze information, statistical software for social sciences (SPSS V. 18, 2004) is used. In descriptive statistics, the distribution and central indices (percent frequency, frequency, maximom, minimum, mean, standard deviation and coefficient of variation) are used. In inferential analysis, one-sample t-test and exploratory factor analysis are used.

Analyzing the findings

Descriptive Findings

Responsive Individual Characteristics

In this study, the mean of age of respondents was 44.73 years (45 years) with a standard deviation of 7.22. The dispersion range of respondents is from the supercontinent to the master's level and above. The highest frequency (67.8%) was for those with master education and higher, and the least frequent (8.2%) was for those

with a Associate Degree. The average occupational prevalence of respondents was 19.19 years (19 years) with a standard deviation of 7.37.

Inferential statistics

In the present study, to determine the factors affecting the marketing of medicinal plants, the normal distribution of data was studied at first.

The results of the normality test

Kolmogorov Smironov test was used to evaluate the normal distribution of data according to Likert spectrum. The P-Value results indicate the acceptance of the null hypothesis. Therefore, the results of data normalization were confirmed by Kolmogrov-Smirnov test. Table 1 shows the results of the Kolmogrov-Smirnov test.

Table 1: A survey of the normal distribution of data

Asimp.sig. (2-yailed)	**Kolmogrov-smirnov Z**	factors	Number of factors
0/548	0/689	Price Factors	**1**
0/897	0/588	Product Factors	**2**
0/785	0/549	locations and distribution channels	**3**
0/896	0/504	Policies and incentive activities	**4**

Investigating the Factors Affecting the Marketing of Medicinal Plants

One sample T-test was used to investigate the effective factors on the marketing of medicinal plants. In this test, the mean of each factor was compared to the theoretical median (Table 2).

Table 2. Evaluation of the Effective Factors on Marketing of Medicinal Plants

Test value= 3							Item	Factor
95% Confidence Interval of the Difference		Mean Difference	Sig. (2-tailed)	t	standard deviation	Mean		
Upper	Lower							
1/67	1/37	1/52	0/000	20/26	0/99	4/52	financial support from the government	price
1/71	1/42	1/56	0/000	21/20	0/97	4/56	Knowledge of price of product in the target market	price
0/74	0/26	0/50	0/000	4/16	1/59	3/50	The price of foreign exchange policies of the country	price
1/69	1/43	1/56	0/000	23/07	0/90	4/58	Inflationary costs in the domestic economy	price
1/61	1/29	1/45	0/000	17/89	1/08	4/54	The price of the finished product in the farm	price
0/91	0/52	0/71	0/000	7/09	1/34	3/71	Foreign investment price	price
1/61	1/29	1/45	0/000	18/16	1/06	4/45	Price volatility in global markets	price
1/65	1/35	1/50	0/000	19/73	1/01	4/50	using the experience of the leading countries	product
1/57	1/23	1/40	0/000	16/37	1/14	4/40	changing the production method from the traditional to the industrial method	product
1/61	1/28	1/45	0/000	17/56	1/09	4/45	package the product	product
1/60	1/28	1/44	0/000	17/58	1/09	4/44	correct product grading	product
0/75	0/29	0/52	0/000	4/59	1/51	3/52	Improvement of product quality, shape and appearance of product	product
1/61	1/29	1/45	0/000	17/82	1/08	4/45	hygiene in the processing of the product	product
1/70	1/42	/561	0/000	21/73	0/95	4/56	trademark for export for the product	product
1/59	1/28	1/44	0/000	18/24	1/04	4/43	training and promoting the proper production of flowers and plants and the variety in the production	product
1/66	1/36	1/51	0/000	/9919	1/002	4/51	export terminal of flower and plant in the region	Location and canal

								distribution
1/64	1/34	1/49	0/000	19/81	0/99	4/49	Knowledge and Understanding of the Structure of Foreign Markets	Location and canal distribution
1/60	1/28	/44 1	0/000	17/76	1/08	4/44	Improvement of the Air Transportation System	Location and canal distribution
1/66	1/37	/52 1	0/000	20/42	0/98	4/52	special stock exchange of flowers and plants in the region	Location and canal distribution
0/60	0/13	/37 0	0/000	3/08	1/59	3/37	using marketing specialists	Location and canal distribution
1/71	1/43	/57 1	0/000	21/95	0/95	4/57	creating sales representatives in the target market	Location and canal distribution
0/92	0/46	0/69	0/000	6/04	1/52	3/69	equipments and facilities for warehousing	Location and canal distribution
1/67	1/39	1/53	0/000	21/77	0/93	4/53	Improvement of the Road Transport System	Location and canal distribution
1/61	1/29	/45 1	0/000	17/82	1/08	4/45	Using the experiences and marketing methods of the leading countries	Incentive and encouraging policies and practices
0/37	-0/09	0/14	0/000	1/21	1/56	3/14	using advertisements in the mass media	Incentive and encouraging policies and practices
1/64	1/35	1/49	0/000	20/48	0/97	4/49	participation in international and specialized Exhibition	Incentive and encouraging policies and practices
1/52	1/20	1/36	0/000	16/83	1/07	4/36	government encouragement policies	Incentive and encouraging policies and practices
0/89	0/44	0/66	0/000	5/87	1/50	3/66	Establishment and expansion of trade unions and associations	Incentive and encouraging policies and practices
1/70	1/42	1/56	0/000	21/72	0/95	4/56	helping international businesses	Incentive and encouraging policies and practices
1/14	0/81	0/98	0/000	11/46	1/13	3/98	inviting ambassadors and foreign businessmen	Incentive and encouraging policies and practices

Findings of the present research.

As shown in Table 2, the mean of all variables is significant. In the price dimension, the "inflationary effects in the domestic economy" with an mean of 4.58, in the product dimension "brand and trademark of exports for the product" with an mean of 4.56, in the dimension of the location and distribution channel "Establishing sales agents in the target market" with the mean 4/57, in terms of Incentive and encouraging policies and practices , " helping international businesses " with an mean of 4.56, have the highest average in

each dimension. As we can see, all the meanings are higher than the theoretical median, which suggests that the factors affecting the marketing of medicinal plants are higher than the mean.

Also, this result suggests that there are several variables or more factors in the marketing of medicinal plants, therefore, factor analysis has been used to reach more or more general factors on the marketing of medicinal plants. In fact, we assume that the variables in the research are reduced to a smaller number of variables that are called the factor. The purpose of the factor analysis is to resolve the internal dependence problem of a set of variables and explain them in several components or factors (Sharifi and Khaledi, 2009).

Factor analysis

Exploratory factor analysis as a multivariate analysis method and interdependent method was used to categorize the factors affecting the marketing of medicinal plants. The KMO test and Bartlet test were used to determine the appropriateness of the data. According to Table 4, the results of the KMO statistic show the adequacy of the model (KMO = 0.765). Also, the results of Bartlett's sprite test confirmed this (0.000> sig.). It should be noted that in this analysis, component analysis has been used to derive components and the Varimax rotation has been used factors rotation .

Table 4. Results of KMO statistics and Bartlett test on effective factors on marketing of medicinal plants

0/765	**Kaiser- meyer – olkin measure of sampling adequacy.**	
13099/887	Approx.chi-squar	**Bartlett's test of Sphericity**
325	Df	
0/000	Sig.	

In this model, the variables used to measure the effective factors in the marketing of medicinal plants were summed up in four factors: the factors 1 to 4 together explained 77.87% of the total variance, which was considered as acceptable and high. The results of factor analysis in the following four main components - price factor, product factor, Location and canal distribution factor, and Incentive and encouraging policies and practices are as follows: among the factors of the price factor "price fluctuations in global markets" with a coefficient of 0.86, in the product factors "brand or tradmarket for exports of the product" with a coefficient of 0.89, in the factors of location and channel distribution factor "use of marketing specialists" with a coefficient of 0.92 and in the factors of Incentive and encouraging policies and practices "participation in international and specialized Exhibition" with the coefficient of 0.93 is the most important factors affecting the marketing of medicinal herbs (Table 5).

Table 5 - Variables related to each factor and the amount of coefficients obtained from the matrix rotain

Factor	**Factorial load**	**Variable**
price	0/814	Government financial support
	0/827	Inflationary effects in the domestic economy
	0/859	Price fluctuations in world markets
Product	0/854	Change in Production Method from Traditional to Industrial
	0/835	Improved product quality, product shape and appearance
	0/897	trademark or brand for export of the product
Location and canal distribution	0/714	Knowledge and understanding of the structure of foreign markets
	0/918	Use of marketing specialists
	0/862	Availability of equipment and storage facilities
Incentive and encouraging policies and practices	0/847	Use of the experiences and marketing methods of leading countries
	0/932	attending international and specialized exhibitions
	0/748	Creation and expansion of trade unions and exporters

Table 6. Extracted factors with Initial Eigen value, percentage of variance and percentage of their Cumulative variance

Cumulative %	Variance %	Initial Eigen value	Factor	component
20/790	20/790	5/405	price	2
39/422	18/632	4/844	Product	3
53/141	13/719	3/567	Location and canal distribution	4
76/789	23/648	2/581	Incentive and encouraging policies and practices	5

As Table 6 shows, the effect of factors on marketing of medicinal plants was 76.79%, which was the factor of cost (20.790%), product factor (18.632%), factor of location and distribution channel (13.719% 13%) and Incentive and encouraging policies and practices (23.648%).Conclusion In this model, the variables used to measure the effective factors on the marketing of medicinal plants were summed up in four factors: the factors 1 to 4 together explained 77.87% of the total variance, which is considered as acceptable and high.

The results of exploratory factor analysis showed that among the factors influencing the marketing of medicinal plants, price factors are most important among the factors of price, product, location and distribution channel and the variable of Incentive and encouraging policies and practices. The results of factor analysis showed that among the price factors of the item "Price fluctuations in global markets" with the coefficient of 0.859, the most important factor affecting the marketing of medicinal plants was identified. These results confirm the results obtained from Sajidipour and Mashayekhi (2015), Rahmani and Abdoli (2013), Bagheri et al. (2010), Tan and Freathy (2014).

In the product factors, the "trademark symbol or brand for export for the product" with a coefficient of 0.89 was identified as the most important factor affecting the marketing of medicinal plants. These results confirm the results of Shaker's research (2004), Rahmani and Abdoli (2013), Sher et al (2013), Gandhi (2006). In the location and distribution channel factors, "use of marketing specialists" with the coefficient of 0.92 was identified as the most important factor affecting the marketing of medicinal plants. These results confirm the results of Bagheri et al. (2010), Tan and Freathy (2014), Sher et al (2013), Ramesh Kumar and Janagam (2011).

In the Incentive and encouraging policies and practices factors,"presence in international and specialized exhibitions" with the coefficient of 0.93 were identified as the most important factor affecting the marketing of medicinal plants. These results confirm the results of Shakeri's research (2004), Rahmani and Abdoli (1392), Moradi Locke et al. (2011), Payne et al. (2008).

Research suggestions

Considering the fact that price factors influenced the marketing of medicinal plants. Therefore, we can suggest:

• Empowering the government to play an important role in motivating production by giving credit. In this regard, the government can provide financial support to producers and exporters by providing low interest loans. Also, cheaper credits are being paid to strengthen traditional producer units, which, in addition to motivating, improve production and increase revenue. Existence of sufficient credit, in addition to efficiency at the time of cultivation, improves the supply of the product in the appropriate market, which leads to more profits for the producer.

• The fluctuation in the prices of medicinal products and herbs indicates that, on the one hand, there are no appropriate pricing and distribution systems for these types of products in the country and, on the other hand, inefficiencies and inadequacies in the market for agricultural products (between producer and consumer), so in this regard, various surveys show that a small share of the consumer's payment price was generated by the producer and this rate was also high. It is suggested that the government implement the appropriate management system with the necessary measures.

Considering the fact that the product's factors influenced the marketing of medicinal plants. Therefore, it can be suggested:

- Manufacturers and exporters of Medicinal Plants are changing the way of production from a traditional to industrial way to create export opportunities by improving the quality of the product, the shape and appearance of the product.
- Because of the continued presence in international markets is having a credible trademark and maintaining it in the target markets, it is suggested that using a trademark or brand for exporting products, the image of customers about product and the market of a product or company or a group of companies in the market be Changed. The trademark contains messages about quality, price, technology level, reliability, and anything that is relevant in the relevant market and is source of value to the customer. This subjective image appears on items such as brand name, slogans, advertising patterns, and so on.

Considering the location and distribution channel affected the marketing of medicinal plants. Therefore, we can suggest:

- In order to enhance the knowledge and understanding of the structure of foreign markets, it is suggested that unions, through service training, in-service training, workshops, seminars, rais staff awareness about the opportunities and challenges of advancing foreign markets.
- Since one of the success stories of manufacturing companies in quality production owes to the use of new technology, it is suggested that using the equipment and storage facilities increase productivity, quantity and quality of the product, in order to be able to remain at competitive markets.

Considering that inviting ambassadors and foreign businessmen have affected the marketing of medicinal plants. Therefore, we can suggest:

- Participating in international and specialized exhibitions using the experiences and marketing methods of leading countries.
- It is suggested that exporters of medicinal plants take steps to create and expand trade unions and associations to provide many benefits, such as creating and strengthening the spirit of cooperation and coordination between small and medium enterprises, meeting the needs of members in the areas of credit, advertising and so on, assemblage of members to guide matters and facilitate problems in dealing with different sectors of activity, enjoying the possibility of strong presence in the market, competition, diversification and research and development along with flexibility, creativity and entrepreneurship due to small structures and accountability all sorts of demands, reducing socio-cultural gaps and contradictions derive from the transition from traditional systems to modern economies space and the availability of effective government support for its members.

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