

## **The Evaluation of the Effective Factors in the Performance of the Tropical Fruits**

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**ABSTRACT**— This research aims to determine the most important influential factors in distribution channels of citrus in order to increase the efficiency of distribution system. This research is applicable one and interview was used to collect data. Population includes the managers and experts of the sale center of vegetables market, gardeners, dealers and the informed persons. It contains 15 people which include 2 persons from cooperative companies, 3 gardeners, 5 dealers, and 5 retailers. Its validity was determined by the inter-subject concurrence and it was estimated at 88.3%. The snow-ball method was employed to collect the samples. Data analysis was conducted by the theme analysis technique. It was found that the citrus distribution method is traditional in Iran and distribution system has an acceptable speed to transport the citrus from producer to customer, but there were various problems in the system about the health efficiency. In terms of price efficiency index, however; the fruits have not delivered to the customers in a fair price; that is, the fruits are purchased in low prices from the producers and would be delivered to the final customer in higher prices.

**KEYWORDS:** Efficiency, Distribution system, Speed, Health, Price

### **Introduction**

An important challenge of marketing managers and producers is to transport their products to the target markets. Accordingly, decision on the way of transporting products to the purchase or consumption place is a key decision for the marketing managers. The decisions on distribution channels are important as the company should be committed to the decisions for a long time. Given the importance of citrus consumption in dietary pattern and their key role in the health of society, they are considered by all families. However, the issue is resided in the area of internal factors related to the distribution channel, and its analysis is not possible regardless of factors such as consumer, environmental, economic, social, political and cultural. Since research on distribution channel is extensive, the channel is a part of economic system which in turn the economic changes in the country would influence its function and structure. The network is the link between producers and consumers including agents that are interrelated with each other and perform the products distribution. The selection of distribution channels is associated with multiple factors that lead to consumers' access to the products and services at a transparent and fair rate. The economic balance and improvement of both production and consumption depends on the modification and adjustment of network (Albaum et al., 1998). The network can form rational expectations of consumers and producers, and therefore, provide a suitable infrastructure for production and consumption. Hence, it is necessary to identify the most important factors and then to manage the distribution network on the basis of it. Recent trends indicated that the manufacturers of citrus highly tend to shorten the transportation cycle of products to the consumer. Since the citrus are produced in the gardens and they should be sold rapidly, the key attribute of citrus is the consumption aspect and the significant amount of money for purchase and sale of them, so decision making on designing a distribution channel for the manufacturers of the products is very important. According to the above discussion, the main objective of this study is to identify the most important factors in the effectiveness of distribution channels of citrus and to explain an acceptable model of distribution for citrus in the market.

### **Theoretical background**

Australia physical distribution management association has described distribution by basic concepts as below: the management of products flow from the production place (factory) to consumer which includes extensive activities such as efficient transportation of materials, parts and final products from manufacturer to consumer. From the viewpoint of Hudson, the physical distribution refers to a set of activities that are concerned with the control, handling and storage of materials; the activities would be conducted within a production system or a larger size (more than one place of production). This area may be contained activities before, during and after the process of production. In some companies, physical distribution contains purchase of raw materials, internal movement, storage and replacement of material, transportation and shipment to the out of organization (Balbaky et al., 1995). According to Fagarty, the purpose of distribution management is to access a desired level of customer service in a

determined cost or less one. Distribution decisions affects items such as facilities, transportation, investment, low frequency inventory, production, communications and information processing. Decision on the distribution channels is one of the most important decisions that managers are faced with it. The decision about the physical distribution of products has a direct impact on other marketing decisions. For example, the pricing policy of a company depends on whether the company uses the wholesalers or high level specialized chain stores for sale of its products. Decisions on advertizing and sale personnel depend on the dealers' encouragement, training and motivations. Access to new products or producing products depends on the compatibility of the products with the ability of distribution channel members. Decisions relating to distribution channels often led to long-term commitments towards other companies. There are various viewpoints on the structure of distribution networks proposed by marketing researchers. For example, Cooper and Bavorsaks believed that network structure consists of three key members or partners: manufacturers, wholesalers and retailers. Manufacturers are of two types, some of which include manufacturers who have direct relationship with the customer services such as hospitals and some companies have direct relationship with customers. Further, there are three types of wholesalers (and Griffith and Ryans, 1995):

1) Merchant wholesalers: merchant wholesalers are the first institution to purchase and sale products. The wholesalers adopt the risks of ownership of the products.

2) Commercial agents: wholesalers who carry out marketing activities and do purchase or sale for other companies.

3) Sales branches and manufacturers offices: they acted like as commercial wholesalers. But, the sale branches are dealers owned by the manufacturer that operate independent from the production activity. Sale branches have warehouses to store their inventory, but they have no warehouse sale offices.

Retailers are business units in which provide public and private customers with products or services. Factors such as product, price, place, communications, services, and logistics affect the retailers' strategy and decision-making. To select channels that meet long-term goals in a best way, each distribution channel should be evaluated from the economic perspective, the supervisory control, and comparative measures. The first measure of an efficient distribution channel is its costs which increase by provision of more services and it should reach a level that no also to control costs but also to offer good services. Thus, the offered service list to the consumers of citrus includes quality, health, cost, speed, convenient access, right time, right place, and minimum expenditure (Gaski, 1996).

### **Distribution problems in Iran**

Non-optimum distribution of products is related to the factors such as distribution structure (distribution channels), production structure, and its value (Doaei 2000). In some products, especially essential products, production is not parallel to organization needs. With this regards, the voucher and quota system would be employed to distribute among people. The productions which are not tight, but the failures in the distribution system have created problems both for the producer and the consumer. Developing countries should consider some particular circumstances in local markets such as income level, lack of facilities, cooling and maintenance at home and etc which in turn they affect the consumption pattern, choosing package size, its type and etc. Overall, the main problems of product distribution in Iran can be described as following:

- Widespread and non-integration: there are many failures in this area. In this section, production and distribution systems don't work properly as well as the dealers who establish complex network of product distribution. There is negative competition and reactive bias that lead to profit decline in the whole country. More than 90 percent of people have not the sufficient expertise and according to regular management and planning principles, the lack of suitable solutions in the right time and also the lack of correct solutions among other factors would lead to inconsistency in distribution network of the country.
- The lack of particular solutions addressing distribution network: this part is linked to the previous problem, i.e. the lack of integration in products distribution. When distribution system is not integrated, it leads to the lack of certain programs and solutions. Distribution network is a traditional one; it means that there is no principal definition of the products distribution. In production section, distribution and consumption have no specific organized programs as developed and industrial countries. In other words, programs are daily in the country.
- Excessive interference of government in product distribution network: the beginning of Islamic revolution was faced with conditions such as imposed war, economic sanctions and reconstruction of war affected places. These conditions lead to refuse of government to interfere in this section. This interference is mainly in the form of subsidies to production and consumption sectors.
- The weakness of the private sector in the distribution network: the private sector had a weak performance due to the inability in planning, lack of stability in decision-making and the lack of government support of private sector in the distribution network. In this regard, management weakness and lower levels of scientific and intellectual abilities of leaders can be mentioned.
- No linkage among academic fields in distribution networks: unfortunately most people working in distribution network have no academic education in relation to distribution or have engineering degrees. They never work scientifically.
- Following foreign successful models in an incorrect way: The modeling was done without sufficient research and expertise ignoring structure and culture of the country. Various models have been adopted from countries such as Malaysia, Korea and Japan. However, the causes of their success and our failure are originated from the lack of expertise and the ignorance of our cultural structures and economic situations.

- Failure of distribution network patterns to comply with the economic structure of country
- Availability of subsidies in distribution networks
- Availability of problems such as war and economic sanctions
- Unequal supply and demand in the distribution network

**Empirical background**

Ardestani et al. (2007) in a documentary study using data of citrus internal market investigated marketing status of agricultural products particularly citrus. The results showed a high proportion of intermediaries in product purchase, the low share of the final price for producer, high marketing costs, the high and growing share of the wholesale margin, high net profit wholesale marketing operations, high share of the producer marketing costs of the received price, and the role of wholesalers in the inefficiency of the market for the product. The authors suggested several implications: establishment of the change in the orange marketing with support and participation of gardeners, establishment of marketing services, market regulation by storage and implementation of seasonal tariff. Abdol Rahman et al. (2011) investigated the citrus marketing and determination of wholesaler and retailer margins to determine influential factors on citrus marketing margins in Dezful Province. The results showed that various marketing activities such as rating, packaging, and transportation is done traditionally and manually in Dezful. The net profit of the wholesalers and retailers was more than the net profit of producer. Hosseini and Rafiei (2008) studies the citrus market in Mazandaran Province. The results indicated that the margins of market is larger than the producer’s final price and retailer margin is more than wholesale, the producer share of final price was low (49 percent), marketing costs was about 31 percent. The results indicated that the retailer final price than marketing costs has a significant impact on market margin. Kanungo et al (2002) considered activities to reach the ultimate goal of distribution performed by channel members as the most important factors affecting distribution system. From this perspective, the study of existing functions, relationships, and trends in the channel is necessary. Yu (2005) refers to the transfer costs of distribution channels. Then, the producer can transfer some costs associated with storage, risks, and finding customers to the distributors in order to improve their performance. According to Greene et al. (1995), the power in each distribution channel used by channel members affects the behavior or decisions of one or more channel members. Organizations regulate their behavior regarding each other in accordance with their powers. Three key factors of power imposed by distribution channels are the expected rewards in future, direct and indirect costs, and understanding own power and other distribution channel members power. Cadilhon et al. (1995) asserted that distribution channel would be shaped by three main factors: the first factors affect the market which originated from the characteristics of customers and market; second group of factors affects the company strategies which stems from the company strategies and product attributes; finally, environmental factors such as communication and information technology, power relations and cultural factors are considered as three group of factors affecting the market.

**Methodology**

Current study is applied in terms of purpose, because the findings would be used in practice. A qualitative research was conducted by interviews. A comprehensive review of theoretical background and empirical literature, was performed by the library method (reviewing papers, books, and Internet). In addition, interviews with professors and experts in the area of subject were used to answer the research questions as the instrument of data collection. To analyze interviews data, content analysis of qualitative data were utilized. Content analysis is a wide and heterogeneous set of manual or computer-assisted techniques for contextualized interpretations of documents produced by communication processes *strictiore sensu* (any kind of text, written, iconic, multimedia, etc.) or signification processes (traces and artifacts), having as ultimate goal the production of valid and trustworthy inferences. To ensure the reliability of the content analysis, the inter-thematic agreement technique was used. The following equation was used to estimate coding reliability. In this equation, M is the frequency of coded items between two coders that there was an agreement between them. N1 and N2 are the total frequency of items encoded by the first and second encoders, respectively.

Percentage reliability test =  $2M/N1+N2 *100$

In order to estimate the reliability of the inter-thematic agreement method, the three interviews were coded. Then, thematic analysis was used as the reliability index. The results of the coding have been provided in the following table. As shown, the coding reliability for the conducted interviews is 88.3 percent. As this value is more than 60%, the coding reliability is confirmed and it can be claimed that the analysis reliability of current interview is acceptable.

**Table 1.** Estimation of reliability between two coders

Interviewer	Total codes	Agreements	Retest reliability (percentage)
First	32	30	93.75
Fifth	28	22	78.5
Fourteenth	34	27	93.6
Total	94	88	88.3

Interviews validity should be considered for each step so that obtained results are reliable and trustworthy.

1) Topic selection: the validity of a study relied on theoretical assumptions and the logic of questions derived from the theoretical principals. Given the theoretical literature on the subject and main research questions, the interview questions are determined.

2) Interview: The validity is based on trust in interview process and the quality of interviews. The interviews try to ask correct questions without any bias. Questions would be prepared by the researcher and based on the revisions achieved from professors. The interviewees would be asked similar questions.

3) Transcription: a valid linguistic style is caused to validate transcription. In this study, the respondents' answers were recorded orally and then, were written on the paper. A certain conduct style was employed for the process and the style was performed in all of the interviews.

4) Analysis: the validity of analysis depends on the inclusion of questions in the interview and the logic used by the researcher to interpret the responses. In current study, the questions have a logical sequence. Firstly, respondents were asked about their viewpoint on the research problem, and then the rest of the interview questions were directed in a certain order.

5) Approval: the professors and advisors were asked to examine and confirm the results.

6) Reporting: reporting validity depends on whether it is a valid estimation of the findings or not? and what is the role of report readers in validating the report?

The statistical population includes managers and experts of citrus market, gardeners, middlemen (dealers) and stakeholders who were 15 people which include 2 persons from cooperative companies, 3 gardeners, 5 dealers, and 5 retailers. Since the sample size cannot be determined in the interview method, the interviews will continue to reach responses without repetitive or the saturation point. Hence, the snowball technique was used to select sample in which a participant guide the researcher to other participants.

**Findings**

In order to identify the most effectiveness factors of citrus distribution, 7 experts were interviewed, 4 people had Ph.D degree, 2 were master and 1 was bachelor degree. These people considered speed, price and health as the most important factors. In second step, 15 people were interviewed to answer the questions. The people characteristics including education, work experience, age and gender have been illustrated in Table 2.

**Table 2.** Participants' Characteristics

Activity	Education			Average of experience (year)	Average age	Frequency
	Bachelor	Diploma and Advanced Diploma	Below diploma			
	2			12	45	2
Cooperative firm			2	30	58	3
Gardener		3	2	22	44	5
Middleman (dealer)		1	4	20	44	5

Five professors and literature review were used to identify the influential factors affecting the performance of citrus distribution. Health, speed, price, and distribution methods were determined as the most important factors. As each individual has a different view, the interviewees were asked to present their opinion on the issue. Above items were coded in four items containing speed, distribution methods, transportation and health as shown in Table 3.

**Table 3.** Coding of research variables

<b>Speed theme</b>	code	<b>Methods of distribution</b>	code	<b>Price theme</b>	code	<b>Health theme</b>	code
Products maturated with good speed	39	Sale in tree	31	z	18	correctly picked	1
		Sale to vegetable fields	32	Sale in tree	19	harvest at the right time	2
		Sale to middlemen	33	Sale by middlemen	20	The use of preservatives	3
		Sale to vendors	34	Drought	21	The fallen crops separated from the rest	4
		Sale to cooperatives	35	High cost of labor	22	classification (ranking)	5
		Sale in municipality vegetable sale fields	36	Importation will decrease price	23	Usage of a plastic box	6
		Direct sale to consumer	37	Late supply because of storage	24	degradation due to the use of pesticides	7
		Direct supply in season exhibitions	38	High cost of transportation	25	Non touch by hand in harvest	8
				The warehouse cost will increase total cost	26	Usage of the scissors to cut	9
				Classification will increase the price	27	Not harvest in raining season	10
				Price will control by supply & demand	28	Packaging type	11
				Direct supply will decrease the price	29	Storage in refrigerators	12
				Seller plays the role of investor	30	the traditional Store	13
						The short of industrial warehouses	14
						cars without refrigerators	15
						bulk packing	16
						principles of correct shipping	17

The below table shows the total was achieved for each theme to be prioritized according to their importance.

**Table 4:** Total themes

Total	Fifteen	Fourteen	Thirteen	Twelve	Eleven	Ten	Nine	Eight	Seven	Six	Five	Fourth	Three	Second	First one	Code
15		*		*			*	*	*	*	*	*		*	*	1
15	*	*		*		*	*	*	*	*	*	*	*	*	*	2
15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	3
13	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	4
14	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	5
14	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	6
12	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	7
9		*	*	*	*	*	*	*	*	*	*	*	*	*	*	8
9		*	*	*	*	*	*	*	*	*	*	*	*	*	*	9
9		*	*	*	*	*	*	*	*	*	*	*	*	*	*	10
13	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	11
13	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	12
12	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	13
10	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	14
11	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	15
8	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	16
9	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	17
10	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	18
14	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	19
14	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	20
13	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	21
12	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	22
13	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	23
13	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	24
14	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	25
13	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	26
12	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	27
11	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	28
10	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	29
13	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	30
14	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	31
14	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	32
15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	33
13	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	34
15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	35
13	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	36
11	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	37
9	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	38
15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	39

The following table shows the ranking result of health theme code. As illustrated, all of interviewees considered the correct harvest, harvest in right time and usage of the conservatives as necessary so that crops remain healthy. They were not agreed to the bulk packaging because of crops health. Most people believed that when the crops harvested, the good and bad crops could be separated and then, packaged them in bulk.

**Table 5:** Ranking result of health theme code

Code	People Size	Code	Rank
Correct harvest method	15	1	1
Harvest in right time	15	2	2
Using conservatives	15	3	3
Classification (ranking)	14	5	4
Usage of plastic boxes	14	6	5
Fallen crops are separated from others	13	4	6
Packaging type	13	11	7
Keeping in refrigerators	13	12	8
Quality decline due to the usage of pesticides	12	7	9
Traditional storage	12	13	10
Cars without refrigerators	11	15	11
Lack of industrial warehouses	10	14	12
Non touch by hand in harvest	9	8	13
Usage of scissors to cut	9	9	14
Not harvest in raining season	9	10	15
Principles of correct shipment	9	17	16
Bulk packaging	8	16	17

The ranking result of price theme codes is presented in Table 6. As shown, the codes 19, 20, 25 have the main role in price enhancement in the view of interviewers; that is, sale on tree, sale to middlemen and high cost of transportation had the most roles in price enhancement.

**Table 6.** Ranking result of price theme codes

Code	People Size	Code	Rank
Sale on tree	14	19	1
Sale to middlemen	14	20	2
High cost of transportation	14	25	3
Drought	13	21	4
Importation decrease prices	13	23	5
Late supply due to storage	13	24	6
The warehouse cost increases total cost	13	26	7
Seller plays the role of investor	13	30	8
High cost of labor	12	22	9
Classification and ranking increase the price	12	27	10
Price controls by supply and demand	11	28	11
Low capital of gardener	10	18	12
Direct supply decreases price	10	29	13

Ranking result of the distribution codes indicated that the largest and most effective method is the distribution by dealers and the cooperative firms have the most effect on sale price reduction.

**Table 7.** Ranking result of the distribution codes

Code	People size	Code	Rank
Sale to middlemen	15	33	1
Sale to cooperatives	15	35	2
Sale on tree	14	31	3
Sale to sale fields	14	32	4
Sale to vendors	13	34	5
Sale to municipality sale fields	13	36	6
Direct sale to consumer	11	37	7
Direct supply in seasonal exhibitions	9	38	8

Regarding the speed code, all participants believed that the products were distributed in a right speed and they reached to the final consumer as his/her desired time.

**Table 8.** Ranking results of speed theme code

Code	People size	Code	Rank
Products distributed in right speed	15	39	1

As observed, the distribution networks are traditional in Tehran, which the most basic principles of distribution network include:

1. Producers (gardeners) who enter the products into the network.
2. Wholesalers who are middlemen between producers and final distributors (retailers).
3. Retailers who are the ultimate supplier of products to consumers.
4. Consumers who use products and take out them from the network.

Wholesalers stated that they received fruit and citrus through two middlemen and retailers stated it has been done through three middlemen. It shows that middlemen will increase in each stage of distribution process from primary production places (gardens). It was revealed that the most important actions in citrus health are correct harvest, harvest in the right time, and the usage the conservatives. The sale on tree, sale to middlemen, and high cost of transportation play the main role in price increase and crops will reach to the consumers rapidly.

### Conclusion

The main purpose of this study was to identify the most important factors in distribution channels of citrus products. Given research literature and interview with customers and experts, three factors including speed, health and price were found to be influential factors in the efficiency of citrus distribution channels. In addition, experts believed that the distribution system has a suitable speed for shipping citrus from producer to consumer, but there are many problems in distributed system health which are: 1) the citrus did not harvest by trained and qualified persons; therefore, the damaged citrus during the harvest have affected in terms of lifetime; 2) Disinfection after harvest of citrus can increase their effective lifetime but it has not been performed in Iran; 3) an important part of the health sector is the sorting (ranking) of the weak fruit from strong ones. In fact, this activity is no often well done except in cases where products are exported; 4) the usage of suitable packages (packaging method) such as plastic packaging with one row instead of two rows or big box help to the health of fruit. The keeping method of fruits in a way that the surplus fruits would be maintained in suitable refrigerators and be entered to the market in the right time can be considered as an effective strategy for transferring healthy fruits to the consumers. The transportation was also important. The workers, who are engaged in transportation activity, don't handle the packages carefully, while this activity can affect fruit health. Furthermore, as fruits remained in fruit stores more than other places and they are the final loop of supply chain, the most fruit failures and wastes are due to remaining in retailers. Unfortunately, the retailers who send the fruits to sale fields have not suitable places for fruits storage. Hence, they will be damaged. The last index of effectiveness was price. Unfortunately, fruits don't reach to customer at fair prices; that is, fruits would be purchased in lowest price from the gardener and be delivered to consumer in higher prices. The factors that lead to price increases include:

- Increasing cost of pre-production containing irrigation, garden maintenance, fertilizer, spraying, etc.
- The costs of fruit harvest containing the labor cost to harvest and sorting the fruits.
- The cost of packaging containing purchase of right boxes and the cost of workers for right separation and packaging.
- The cost of storage
- The cost of transportation and transmission to storage
- The transportation cost of middlemen (dealers)
- The cost of transportation to retailers
- The cost of wastes
- Unusual profit that each middlemen receive during the transportation.

### Managerial implications

The findings of current study can provide stakeholders of citrus field with recommendations for the country. The gardeners training on keeping and harvest and its implementation by cooperatives and agriculture offices, establishment of standard refrigerators by the government and private section for storage of the fruits, the fruits sale fields equipped to the refrigerators by wholesalers in order to keep fruits daily, usage of refrigerated vehicles for transportation, usage of skilled labor for transportation of fruits, usage of appropriate healthy and safe fruit basket, and picking, packaging and sorting fruits through trained and experienced workers are solutions to help the citrus distribution industry of country. Increasing public awareness of producers and distributors in different regions of province, improvement of the packaging system using new packaging methods and the creation of related culture by mass media to modify the current consumption pattern (such as purchase consistent with needs) are essential. In order to reduce the cost of loading and unloading, it can be used the suitable loading methods such as forklifts and other equipment's in major distribution centers. It is important to finance adequately for gardeners, so that they are not forced to sell the fruits with low price. Gardeners should be trained for storing, picking, packaging and sorting fruits consistent with market demand and consumers' needs. Unfortunately, a part of costs is due to the high price of gasoline and transportation



infrastructures. Hence, transportation subsidies would help to decrease final price of fruits. The elimination of some middlemen and the reduction of channel levels is another strategy. Usage of refrigerators in retailing stores would be beneficial to reduce the waste. The government should control the price of citrus. The seasonal store of direct supply is solution to improve prices. Finally, the role of supermarkets and chain stores such as Refah and Hyperstores are critical in supplying the fruits directly from gardener with acceptable quality and packaging to consumer. If some companies establish which are specialize in picking, sorting and selling citrus, the consumer would be able to achieve fruits with a better quality and it provides him/her with more benefit. The expansion of cooperative companies such as current cooperatives for juice and concentration can directly transfer the marketing and sale activities to the cooperatives. Fruits and vegetables sale fields play an important role in regulating the market of agricultural products. Hence, construction of fruits and vegetables sale fields is essential in all of regions of the country. The sale fields establish required infrastructures in production and distribution of fruit, vegetables and agricultural products, and they conduct crops from production to distribution in right principles. According to retailer respondents to the approach of current trade unions of fruits and vegetables particularly in Tehran, the separation of retailers Union, wholesalers and independent unions is an important action. Due to increasing numbers of middlemen in various stages of crops distribution process, the citrus should directly be transferred to the final consumers by declining the numbers of middlemen. Fruit and vegetables sale fields can reduce middlemen in fruit market and help to decrease distances between producer and consumer. The mechanized warehouses and sufficient refrigerators fitting with the population of each region to provide on time and right distribution to meet market demand by providing banking facilities and incentives for private section may help to decrease the keeping cost and services cost at later stages. Low amount of fruits and citrus production in province do not satisfy its demand. It is necessary to expand gardens in different regions of the province because of climate variety in some regions. As the distribution agents are not informed, it is necessary to hold training courses to be familiar with new marketing tools, pre-sale, ordering, right packaging and labeling. Provision of required facilities for the distribution agents to purchase transportation vehicles is a logical strategy. Moreover, booths and cooperatives can establish near to distribution place. Finally, the transportation cost is important in physical distribution of crops. Therefore, development and improvement of road transportation in the province and in relation with neighbor provinces, and the establishment of rail-roads are the most important actions to reduce the final cost of fruits and citrus and to organize distribution network.

### **Limitations**

Undoubtedly the implementation of any research is associated with problems, obstacles and limitations that the researcher should attempt to control and to minimize them as possible. There were limitations in this study. The first was the limited cooperation of managers and experts in this study. They did not provide adequate information because of incorrect culture in Iranian organizations in which they didn't provide the researcher with sufficient information as they thought that it reveals the possible weaknesses of managers. Second, due to the extensive area of research, time limitations and deviation of statistical population, this research requires a lot of time. Third, the scholars and practitioners, the lack of a list including people who are active in citrus products distribution, and the lack of an institution or organization for recognition of individuals were some limitations against the research. Finally, the interview is a sufficient instrument to collect data, but its results can't be generalized to a bigger population like questionnaire.

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