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# Strategies and Tactics for the Development of Fruit and Vegetable Export from Iran to Russia

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## Abstract

Given the agricultural potential of Iran on one hand, and the shortages in Russia's fruit and vegetable supply, along with its expanding vegetable market on the other, Russia has become a major market for Iranian exporters of fruits and vegetables. The aim of this study was to identify and rank strategies and tactics for the development of fruit and vegetable exports to the Russian market. The research followed a developmental-applied approach in terms of goals, and employed a descriptive survey using an exploratory mixed method. The statistical population consisted of experts and fruit and vegetable exporters to Russia, who were sampled using the purposive snowball technique. The qualitative phase included 20 participants, while the quantitative phase involved 100 individuals. The qualitative data were analyzed using content analysis to derive strategies and tactics, which were then ranked in the quantitative phase using the TOPSIS technique. Two strategies, namely entry and sustainable presence, were identified for the development of fruit and vegetable exports, along with 28 corresponding tactics. Finally, the top ranks were assigned to fixing regulations, establishing incentives, and stabilizing the exchange rate.

## Keywords:

*Fruit and vegetable export development, Russian market, strategies, tactics, TOPSIS*

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## INTRODUCTION

The political and economic survival of oil-rich developing countries, such as Iran, heavily relies on oil export revenues. However, considering Iran's potential for producing and exporting non-oil products and commodities, particularly crops, it is necessary to shift away from an economy dependent on oil earnings. This can be achieved by recognizing regional talents and providing them with significant support. Moving away from reliance on fragile single-commodity exports highlights the importance of identifying new export potentials and gaining relative advantages. Crops offer an excellent opportunity to accomplish this goal ([Mehrabi Bosharabadi & Koochakzadeh, 2009](#)).

Export improvement offers significant advantages, including mass production, foreign exchange supply, employment generation, quality enhancement, and the reduction of commodity prices. Clearly, a proper paradigm is necessary to fully leverage the benefits of economic development ([Sadeghi et al., 2012](#)). Currently, the exportation of goods and services has gained significant importance due to changes in global consumption patterns, the elimination of trade barriers, the globalization of the economy, and the shift towards economic cooperation in international trade relations instead of domination. Therefore, it is natural for all nations to strive for a higher share of global trade, as countries with a greater share can attain optimal economic power. Additionally, the geographic location of countries and the commodities they produce create a suitable foundation for foreign trade.

There are numerous indicators of international trade development. Customers gain knowledge about commodities from different regions through travel, television programs, internet surfing, and other forms of information technology. As a result, they demand commodities that local firms are unable to supply. This import competition drives further research and development, leading to the rapid integration of new technology into

local industries. Simultaneously, as most parts of the world experience prosperity, the consumption of commodities increases. Foreign firms identify and capitalize on opportunities in these growing markets by selling their goods. They also make substantial changes to their production operations, which are often fixed and high in volume, depending on the type of production. Many organizations focus on their core competencies and outsource other operations. Major industries consist of specialized support companies that assist in areas such as exportation, international transportation, trade credit provision, foreign trade, tariff clarification, and more.

Given the per capita fruit consumption in Russia and its comparison with the recommended global consumption rate, there is promising potential for increased fruit importation and sales in Russian markets. The growing significance of fruit consumption among urban families in Russia, surpassing the consumption rates of items like chocolate, yogurt, and cheese, is a positive sign for fruit exporters targeting the Russian market. Fruit consumption in the country is primarily concentrated in the western regions, resulting in highly competitive fruit markets in western Russia. Over 50 percent of fruit exports to Russia come from neighboring countries such as Turkey, Uzbekistan, and Poland.

A significant challenge for various commodity exports, including fruits, from Iran is the lack of a model to explain export development strategies in specific and applied fields. Past export successes in Iran have relied more on experimental and traditional methods rather than scientific models. Consequently, when faced with competitive movements from other countries, Iran's export volume and market share have suffered. Achieving sustainable export growth relies on the principles of sustainable export development. Different models for sustainable development exist, depending on enterprise specifications, activity types, and the conditions of the target society and market ([Fathi, 2011](#)).

The Russian market offers several attractions, including its large population (150 million) and ranking as the sixth-largest economy in the world. It also boasts a high per capita income, estimated at approximately 28,000 USD in purchasing power based on the 2018 prediction. Furthermore, Russia is the world's fifth-largest food importer, consuming around 3 percent of the world's total food. The country has a high per capita consumption rate, with fruits holding significant importance in their food basket. Additionally, Russia receives fruit supplies from distant countries such as Turkey, Uzbekistan, and Poland. On the other hand, Iran has a relatively low share in fruit and vegetable exports due to various reasons, including a lower exportation share, a lack of scientific and practical procedures for export development, and underutilization of agreements. Hence, this study focuses on addressing the absence of strategies and tactics to change the current status. The main research question guiding this study is as follows: "What are the strategies and tactics for the development of fruit and vegetable exports to Russia, and how can they be scientifically and practically implemented?" (Saberi Haghayegh, 2018).

Due to its unique climatic and geographical conditions, Iran stands out as one of the few countries highly capable of crop production. It holds the third position in terms of the diversity of horticultural products globally, following China (first rank) and Turkey and the US (commonly second). Given these factors, Iran can prioritize the agricultural and horticultural sectors as part of its export development strategies. By developing various agricultural and horticultural products, Iran can meet domestic demand and export the surplus, thereby earning foreign exchange. The significance of this research lies in seizing missed opportunities from recent years. The development and implementation of export development strategies and tactics will lead to increased exports of fruits and vegetables, a boost in non-petroleum exports, agri-

cultural prosperity, growth in processing industries, and various other positive outcomes such as employment and economic prosperity (Saberi Haghayegh, 2018).

The main scientific objective of the research was to identify strategies for the development of fruit and vegetable exports to the Republic of Russia. The minor applied objectives were to identify strategies for increasing fruit and vegetable exports to Russia, tactics for increasing fruit and vegetable exports to Russia, tactics for maintaining a continuous presence in the fruit and vegetable market of Russia, and tactics for continuous presence in the fruit and vegetable market of Russia.

Attention to international activities is a key aspect of marketing. Various theories exist in the field of international marketing, which we will discuss in this section. The concept of 'international marketing' refers to commercial strategies aimed at delivering goods and services from one country to customers in other countries for profit. International marketing also involves the production and sale of commodities and services in multiple countries without crossing the main borders of a country (Julian, 2012).

Every company competing in an industry has an explicit or implicit strategy. This strategy may have been developed through explicit planning processes or gradually shaped by the activities of different departments. However, relying solely on the methods employed by individual departments rarely results in the best strategy. It is important to consider which strategies and tactics can help our company or organization transform internal weaknesses into strengths, turn external threats into opportunities, and utilize internal strengths and external opportunities to achieve organizational goals and objectives (Guilaninia & Zahmatkesh, 2012).

## Literature review

In a study on the demand relationships in orange exports to Russia, with a focus on Egypt, Hatab (2016) used a Rotterdam im-

port allocation model to examine Egypt's position among the main countries exporting oranges to Russia. According to their findings, Egypt demonstrates a significant relative advantage compared to other orange suppliers to Russia. If Russia were to increase its importation budget in this sector, Egypt would have a good chance of capturing a larger share in the Russian market. [Leonidou et al. \(2015\)](#) investigated the impact of an effective environmentally-friendly strategy on performance and relative advantage. The research suggests that environmental issues hold a crucial position in the international context, potentially leading to success and improved export performance. The study indicates that both internal and external factors play a role in adopting an environmentally-friendly business strategy, which, in turn, influences market and financial export performance.

[Barnes et al. \(2015\)](#) examined the impact of business export strategies on export performance and the attainment of sustainable competitive advantage. The findings demonstrated that export strategies such as social responsibility, competitive strategies, and market entry strategies were effective in enhancing export performance and reinforcing sustainable relative advantage for businesses.

In a study focusing on the assessment and analysis of manufacturing companies engaged in exporting, [Nalcaci and Yagci \(2014\)](#) explored the effects of marketing capabilities on export performance using a resource-based view. The researchers concluded that effective management of market access mechanisms, competitor information, and utilization of this information had a positive influence on export performance. [Leonidou et al. \(2013\)](#) conducted a study on the implications of resources and capabilities as drivers of hotel environmental marketing strategies, with a particular emphasis on competitive advantage and performance. Employing a resource-based view, the researchers developed a model to investigate the consequences of environmentally-

friendly marketing strategies in the Greek hotel industry. [Beleska-Spasova et al. \(2012\)](#) investigated the relationship between organizational capabilities, resources, export strategy, and performance of British exporters. The researchers identified four distinct resource capabilities—managerial, knowledge, planning, and technology resources and capabilities—that significantly enhanced the export performance of the exporters.

In a study examining food imports from Denmark to Russia, [Elvestad and Nilssen \(2010\)](#) conclude that protecting food markets for imported foods is incentivized due to Russia's heavy dependence on imports. It is predicted that Russia will not achieve self-sufficiency in food supply and production in the future. Additionally, the Russian government exhibits a strong motivation to import foods into its market. [Amjadi and Amiri \(2017\)](#) investigated the factors contributing to the enhancement of export sustainability, with a focus on organizational communications, customer orientation, and behavioral commitment. Using the PLS software package, they tested research hypotheses and determined that behavioral commitment and organizational communications significantly influenced all aspects of export performance. Furthermore, customer orientation was found to have an impact on export performance, behavioral commitment, and organizational communications. [Omidi \(2015\)](#) conducted a study on the factors influencing Iranian kiwifruit exports to Russian markets, examining 15 factors among exporters and organizations. The results indicated that the significance of the effective factors varied, with the instability of regulations being identified as one of the most influential factors. [Qarecheh et al. \(2015\)](#) explored the factors affecting the sustainable export of tile and ceramic companies listed in the Tehran Stock Market. Their findings revealed that export capability, international factors, and organizational capability had the highest to lowest impact on sustainable export, respectively.

Among the influential indices, diversity within export capability, quality within organizational capability, and sanctions within international factors were identified. **Ghazizadeh (2014)** investigated the factors influencing the success of Iranian exporters in Middle Asian markets and proposed suitable solutions for increasing market share. The study emphasized the influence of environmental conditions in the target market, with the success rate of exports being significantly associated with political, economic, and informational components of the target market's environment, as well as economic and technological components of the national environment. Additionally, marketing components, production processes, internal information dissemination, and certain elements of the marketing mix (specifically product and promotional activities) were found to impact export success. **Sadeghi et al. (2012)** conducted research to identify variables influencing export enhancement from the perspective of exporters. They developed a model comprising four sections: demographic, economic, environmental, and product marginal factors. The factors were ranked in terms of importance and effectiveness, with environmental factors, product marginal factors, demographic factors, and economic factors being identified in that order. **Moshabaki and Khademi (2012)** examined the role of export promotion programs on the export performance of exporters. They found that while the programs did not have a direct influence on export performance, they exerted an indirect influence through internal environmental factors. **Safari (2011)** addressed the competitiveness of Iranian brands in export markets and emphasized the need for strategies to ensure viability in export markets, enter growing export markets, and exit declining markets. The study also stressed the importance of identifying and studying target markets. **Shafian et al. (2011)** investigated the impact of the product element of the marketing mix on the development of detergent exports produced by

Mahdtaban Inc. to Iraq. The findings provided recommendations for export improvement to the studied firm, as well as other relevant industries and organizations.

## METHODOLOGY

This study was a developmental-applied study with specific goal and objectives aimed at developing export strategies and tactics for fruit and vegetable exporters to Russia. In terms of methodology, the research adopted a descriptive survey approach. The study followed a scientific and systematic procedure, employing an exploratory mixed-method approach in two distinct steps.

### *Step 1. Qualitative phase*

This phase comprised several steps. Firstly, various strategies were identified by reviewing documents and successful case studies of countries exporting to Russia. Secondly, basic tactics were identified based on document analysis. Thirdly, exploratory interviews were conducted with experts, and the results were analyzed. Finally, export development strategies and tactics were formulated, specifically tailored to the studied market, utilizing content analysis.

### *Step 2. Quantitative phase*

In this phase, a descriptive survey method was employed to evaluate the selected model. The objective of this phase was to assess the theoretical maturity of the strategies and tactics and rank the factors at an executive level. Friedman's test was utilized to examine the equality of the tactics, while the TOPSIS technique was applied to rank them.

The statistical population consisted of exporters and export experts, specifically focusing on fruit and vegetable exporters to the Russian market, export officials, and experts in the research field. The populations for the qualitative and quantitative phases were as follows:

In the qualitative phase, information was gathered from various sources such as the Department of Industry, Mining, and Trade,

Table 1

*The Steps of the Research Methodology*

Research methodology	Objective	Activities	Data collection instruments	Analysis method
Qualitative	Achieving theoretical and experimental framework	Literature review, observation, and conducting a comparative study for identification and literature review	Theoretical and experimental framework and the literature	Document review; content analysis
	Identifying strategies and tactics	Interview with experts	Structured interviews	Content analysis
Quantitative	Confirming strategies and tactics	Designing a questionnaire based on tactics and derived from research findings (qualitative data, literature review, and interview with experts)	Self-designed questionnaire inspired by reference and customized questionnaires for the present case study	Friedman test
	Ranking tactics	Re-adjustment of information for ranking the tactics	Collected questionnaire	TOPSIS

Chamber of Commerce, Trade Promotion Organization, and other relevant agencies. Only experts, officials, and teachers with expertise in the Russian market, both in the executive and academic fields, were selected for interviews. The total number of participants was 20, and interviews were conducted until theoretical saturation was achieved.

In the quantitative phase, the statistical population consisted of all fruit and vegetable exporters to Russia. The total number of exporters was estimated to be no more than 100, based on data provided by the Chambers of Commerce and Trade Promotion Organization.

In the qualitative phase, since the number of experts was limited, all identified individuals were interviewed. Similarly, in the quantitative phase, as the population was restricted, all identified exporters were invited to participate in the study. The snowball technique was used to select the sample in the qualitative phase, while the judgmental purposive method was employed in the quantitative phase.

Data were collected through structured in-

terviews with experts and a comprehensive literature review. The interviews were conducted in-depth, either face-to-face, by telephone, or via email, depending on the time and location constraints of the interviewees. The questionnaire was self-designed, taking inspiration from relevant questionnaires customized for the present case study. The design of the questionnaire was guided by academic teachers, advisors, and experts in the export field. Considering the importance of the factors, multiple questions were included to ensure comprehensive coverage. The questionnaire's validity was confirmed by a panel of experts, and its reliability was assessed using Cronbach's alpha, resulting in a value of 0.937, which is considered acceptable.

## RESULTS

### *Qualitative phase*

After conducting a thorough literature review, our focus shifted towards examining the status of Iranian fruit and vegetable exports, analyzing Russia's import structure, exploring strategies for foreign market entry, and delving into theoretical tactics that ex-

plain the factors influencing the choice of entry methods. We utilized relevant theories and theoretical concepts to gain a deeper understanding of fruit and vegetable exports to Russian markets. Through content analysis, we employed a systematic technique to extract two main strategies for improved market entry and sustainable presence, along with 19 tactics aligned with the research objectives. These strategies and tactics formed the foundation for conducting interviews with experts (Table 2).

The interviews with the experts were meticulously transcribed and analyzed alongside comprehensive notes taken during the interviews. This analysis phase was conducted using content analysis, a widely employed method in qualitative research. The strategies and tactics were identified through conceptual content analysis, employing a principle that involved categorizing themes and their presence or absence (Rasouli & Amir Atashani, 2014). It is worth noting that the propositions derived from the literature review and those derived intuitively were selected with the guidance and input of supervisors and advisors.

As depicted in Table 2, a total of 28 tactics were derived by combining the ones extracted from experimental and theoretical analyses, along with those obtained from the interviews. These tactics were subsequently assigned weights and ranked using the TOPSIS technique during the quantitative phase.

#### Quantitative phase

In the quantitative phase, we initially employed Friedman's test to evaluate the strategies and establish the inequality among the tactics. As the objective of the research was to rank the tactics, we present the results obtained from the TOPSIS technique. During this phase, the experts selected for questionnaire completion were requested to rank the 28 derived tactics for enhancing Iranian fruit and vegetable exports to Russia.

#### Calculating normalized and weighted matrix

$$r_{ij} = \frac{f_{ij}}{\sum_{j=1}^m f_{ij}^2}, j = 1, \dots, n$$

$$v_{ij} = w_i r_{ij}, j = 1, \dots, n$$

In which  $w_i$  is the weight of the  $i$ th index, and we have

$$\sum_{i=1}^n w_i = 1$$

#### Determining positive-ideal and negative-ideal solutions

$$A^* = \{v_1^*, \dots, v_n^*\} = \{\max_j v_{ij} / i \in I\}, \{\min_j v_{ij} / i \in I'\}\}$$

$$A^- = \{v_1^-, \dots, v_n^-\} = \{\min_j v_{ij} / i \in I\}, \{\max_j v_{ij} / i \in I'\}\}$$

in which  $I'$  is the set of positive indicators and  $I''$  is the set of negative indicators.

#### Calculating distance size using the Euclidean method

The distance of the  $i$ th alternative from the positive-ideal solution:

$$D_j^+ = \sqrt{\sum_{i=1}^n (v_{ij} - v_i^*)^2}, j = 1, \dots, J$$

The distance of the  $i$ th alternative from the negative-ideal solution:

$$D_j^- = \sqrt{\sum_{i=1}^n (v_{ij} - v_i^-)^2}, j = 1, \dots, J$$

#### Calculating relative closeness from the ideal solution

$$C_j^* = D_j^- / (D_j^+ + D_j^-), j = 1, \dots, J$$

#### Ranking variables based on the order of $C_j^*$

Based on the findings presented in Table 6, it is evident that tactics 9 (regulating the fruit and vegetable export sector, avoiding arbitrary export decisions, and steering clear of detrimental political trade decisions), 7 (implementing export incentives, such as air transportation subsidies and participation in

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Table 2

*Tactics (Tactics) Derived from Experimental Theoretical Analysis and Interviews with Experts*

Sr. No.	Tactics derived from experimental-theoretical analysis (New and supplementary) tactics derived from analyzing interviews with experts	Final tactics
1	Fixing regulations of fruit and vegetable exports	Fixing regulations of the fruit and vegetable export sector, avoiding ad hoc decisions for export, and not involving destructive political decisions in trade relations
2	Creating and exploiting appropriate and reputable brands	Creating and using reputable brands to avoid the packaging of Iranian crops by other brands and intermediary countries
3	Standard packaging for export by companies and exporters	Using mechanization and international standards, especially ISO and GAP22000 Haccp, in production and packaging for export to accomplish the goals of waste reduction and crop preservation from the farm (harvest, storage, transportation, and distribution) to fork
4	Observing health and quality standards regarding all Iranian fruit and vegetable items to Russia by exporters and its supervision by the Iran National Standard Organization	Observing health and quality standards of fruits and vegetables by exporters (export-focused production based on the target market) and monitoring by the Iran National Standards Organization
5	Constructing fruit and vegetable export terminals from Iran to Russia	Constructing fruit and vegetable export terminals from Iran to Russia
6	Establishing a transportation network through export terminals	Establishing a proper transportation network to supply equipment requirements (refrigerated containers and ships) through export terminals and the activation of the Dagestan route
7	Emphasizing the establishment and use of the Russian green corridor (belt) through national agreements	Focus on launching and using the green corridor (belt) of Russian imports through national agreements
8	Laying a platform for signing long-term contracts with a fixed price, taking the tolerance of exchange rate fluctuations into account	Laying a platform for exporters to sign long-term contracts with a fixed price, taking the tolerance of exchange rate fluctuations into account
9	Providing suitable transportation equipment such as refrigerated ships and containers	Merged in Row 6 due to common nature
10	Producing commodity by imports using the potential of Anzali Free Trade-Industrial Zone as the only free zone along the Caspian Sea and its re-export, as well as the entry of Iranian goods to the customs of Astrakhan Special Economic Zone "LOTUS" and using their existing and potential capacities	The joint investment of the private sector by both sides for (a) the production of the final product derived from imports with franchise and the use of the potentials of the Anzali free zone as the only free zone on the coast of the Caspian Sea, (b) re-export, (c) entry of Iranian commodities to the customs of Special Economic Zone "LOTUS" of Astrakhan using the Russian facilities, and (d) establishing distribution units in Russia
11	Converting Iranian Commerce House in Astrakhan to a permanent place to exhibit and supply Iranian commodities and creating a permanent negotiation hall in this House for information sharing between the traders of two countries and signing agreements	Converting Iranian Commerce House in Astrakhan to a permanent place to exhibit and supply Iranian commodities and creating a permanent negotiation hall in this House for information sharing between the traders of two countries and signing agreements
12	Obtaining the license to establish preferential customs tariffs by the Islamic Republic of Iran from the Russian Federation, like customs tariffs of other commonwealth countries, especially for foods and crops.	Obtaining the license to establish preferential customs tariffs by the Islamic Republic of Iran from the Russian Federation, like customs tariffs of other commonwealth countries, especially for foods and crops
13	Opening branches of Russian banks in the Anzali free region	Founding a joint Iranian-Russian bank, opening branches of Russian banks in the Anzali free zone, and reinforcing Mir Business Bank in Astrakhan in terms of the number of branches and the volume of exchanges
14	Reinforcing Mir Business Bank in Astrakhan in terms of the number of branches and the volume of exchanges considering the lifting of sanctions and the establishment of Swift	Merged with Row 13 due to common nature

## Strategies and Tactics for the.../ Saberi Haghayegh et al.

Table 2

*Continued*

Sr. No.	Tactics derived from experimental-theoret- (New and supplementary) tactics derived from analyzing interviews with experts	Final tactics
15	Activating economic and commercial relations between Iranian provinces with export advantage and the regions of the Russian Federation	Activating trade relations between Iranian provinces with export advantage and the regions of Russian Federation and using the experiences of the commerce chambers of Iran and its provinces and the joint chambers
16	Canceling the need for visa for the citizens of Iran and Russia to facilitate their commute with the priority of merchants and traders	Canceling the need for visa for the citizens of both sides with the priority of merchants and traders
17	Increasing and facilitating the dispatch and acceptance of business delegations and tourist tours	Increasing and facilitating the dispatch and acceptance of business delegations and tourist tours
18	Launching cargo and passenger shipping lines between Bandar Anzali and Astrakhan to strengthen and make saving on the commute of traders and businessmen	Strengthening cargo and passenger shipping lines and reducing the tariff rate of maritime transportation
19	Granting facilities to businessmen and companies with advantages to set up an exhibition of the capabilities of Iran in strategic cities of Russia	Granting facilities to businessmen and companies with advantages to set up an exhibition of the capabilities of Iran in strategic cities of Russia with an emphasis on exchange transactions
20	Granting facilities to the Russian side to hold exhibitions of their commercial and industrial capabilities in advantageous provinces of Iran with an emphasis on exchange transactions	Merged with Row 19 due to common nature
21	Cultivating and producing Iranian fruits and vegetables in different regions of Russia (overseas crop production)	Cultivating and producing Iranian fruits and vegetables in different regions of Russia (overseas crop production)
22	Creating a database to introduce advantageous commodities of Iran to Russia	Creating a database to introduce advantageous commodities of Iran to Russia
23	Creating intermediary processing industries in Russia	Creating intermediary processing industries in Russia
24	Streamlining export by observing executive procedures and packaging regulations of Trade Development Organization (directorate 96.8.15) by exporters and monitoring by the Iran National Standards Organization	Streamlining export by observing executive procedures and packaging regulations of Trade Development Organization (directorate 96.8.15) by exporters and monitoring by the Iran National Standards Organization
25	Revising the tariffs for raw materials needed for packaging to reduce fruit and vegetable packaging cost	Revising the tariffs for raw materials needed for packaging to reduce fruit and vegetable packaging cost
26	Fixing exchange rate	Fixing exchange rate
27	Determining export incentives, such as subsidy on air transportation and presence in major exhibitions such as international food exhibitions	Determining export incentives, such as subsidy on air transportation and presence in major exhibitions such as international food exhibitions
28	Holding training workshops on correct and mechanized methods of fruit and vegetable production, export, branding, and packaging for producers and exporters by international institutions such as Jetro for all relevant people	Holding training workshops on correct and mechanized methods of fruit and vegetable production, export, branding, and packaging for producers and exporters by international institutions such as Jetro for all relevant people
29	Identifying and creating fruit and vegetable export clusters	Identifying and creating fruit and vegetable export clusters
30	Updating the customs information of both sides with the Ministry of Industry, Mining, and Trade and the Ministry of Agriculture Jihad within monthly meetings to achieve a unity of procedure with an emphasized role of Trade Development Organization	Updating the customs information of both sides with the Ministry of Industry, Mining, and Trade and the Ministry of Agriculture Jihad within monthly meetings to achieve a unity of procedure with an emphasized role of Trade Development Organization
31	Establishing export consortia to satisfy high-volume needs	Establishing export consortia to satisfy high-volume needs
	Establishing a joint Iranian-Russian bank	Merged with Row 13 due to common nature

Table 3

*The Calculations Related to the Formation of the Normalized Matrix for the 28 Tactics*

Tactics	EJ	DJ=1-EJ	SUM(DJ)	WJ
T 1	0.998643	0.001357	0.137863	0.009845
T 2	0.998278	0.001722		0.01249
T 3	0.996848	0.003152		0.022863
T 4	0.997794	0.002206		0.016001
T 5	0.99806	0.00194		0.014069
T 6	0.997732	0.002268		0.016454
T 7	0.999742	0.000258		0.001869
T 8	0.99771	0.00229		0.016608
T 9	0.99978	0.00022		0.001596
T 10	0.998658	0.001342		0.009733
T 11	0.995799	0.004201		0.030476
T 12	0.995563	0.004437		0.032186
T 13	0.999799	0.000201		0.001454
T 14	0.994615	0.005385		0.039064
T 15	0.996939	0.003061		0.022207
T 16	0.998603	0.001397		0.010134
T 17	0.997496	0.002504		0.018164
T 18	0.998742	0.001258		0.009123
T 19	0.99395	0.00605		0.043885
T 20	0.997062	0.002938		0.021311
T 21	0.984385	0.015615		0.113262
T 22	0.997634	0.002366		0.017161
T 23	0.994541	0.005459		0.039596
T 24	0.995668	0.004332		0.031424
T 25	0.997586	0.002414		0.017507
T 26	0.947936	0.052064		0.377653
T 27	0.997516	0.002484		0.018018
T 28	0.995058	0.004942		0.03585

major international food exhibitions), and 13 (stabilizing the exchange rate) are ranked higher compared to other tactics. This ranking is based on their lower distance in closeness to the ideal solutions. Table 7 provides a comprehensive overview of the tactic rankings.

### DISCUSSION AND CONCLUSIONS

Figure 1 shows how the strategies and tactics derived from the research were formed.

Regarding the discussion and conclusion from the theoretical content analysis and literature review, two general achievements can be mentioned:

- i Following and optimizing the theoretical

framework to develop and explain basic strategies and tactics (tactics) derived from the review of the library work, research, and important reports, except for the information of Trade Development Organization, Statistical Center of Iran, and the Ministry of Industries, Mining, and Trade, regarding fruit and vegetable export to Russia as follows:

- Analysis of fruit and vegetable exports of the European Union
- Orange export from Egypt to Russia
- South African fruit export supply chain model
- Modeling and predicting Iranian crop exports
- Fruit export strategies of Brazil

Table 4  
*The Positive-ideal and Negative-ideal Solutions*

Tactics	A <sup>-</sup>	Tactics	A <sup>+</sup>
T 1	0.002347	T 1	0.001643
T 2	0.002967	T 2	0.001976
T 3	0.005596	T 3	0.003357
T 4	0.003771	T 4	0.002422
T 5	0.003409	T 5	0.002046
T 6	0.003857	T 6	0.002314
T 7	0.000431	T 7	0.000373
T 8	0.003982	T 8	0.002389
T 9	0.000364	T 9	0.000315
T 10	0.002356	T 10	0.00165
T 11	0.00743	T 11	0.003462
T 12	0.008002	T 12	0.004273
T 13	0.000328	T 13	0.000284
T 14	0.009553	T 14	0.005101
T 15	0.005312	T 15	0.003187
T 16	0.002334	T 16	0.001634
T 17	0.004392	T 17	0.002635
T 18	0.002119	T 18	0.001555
T 19	0.01079	T 19	0.005028
T 20	0.005339	T 20	0.002851
T 21	0.031329	T 21	0.009623
T 22	0.004061	T 22	0.002705
T 23	0.009802	T 23	0.004568
T 24	0.007808	T 24	0.003638
T 25	0.004341	T 25	0.002605
T 26	0.331071	T 26	0.050875
T 27	0.004328	T 27	0.002597
T 28	0.009319	T 28	0.004976

- Import strategies of Russia
- Russian market entry strategies for small and medium-sized enterprises
- Modern methods of fruit and vegetable supply
- Fruit import and export of Georgia

ii Content findings from the literature, which can itself be presented in two sections:

a) Validation of the problem and the significance of the research: the results of Iran-Finland Trade Development Organization (2010), Sadeghi et al. (2012), and Fathi (2011) validate the problem and the significance of the present research.

b) Modeling and optimizing strategies and tactics by the content analysis technique: some strategies could be derived from the lit-

erature based on the results of Albertini et al. (2011), Elvestad and Nilssen (2010), Omidi (2015), and Sadeghi et al., (2012).

After conducting interviews with export experts focused on Russia, a list of 28 tactics for enhancing fruit and vegetable exports to Russia was generated as a result of the qualitative phase. To ensure the variability of the strategies and tactics derived from the qualitative phase, Friedman's two-factor analysis of variance was utilized. Subsequently, the tactics were ranked using the TOPSIS technique. The results indicated that the significance level obtained from Friedman's test was below 0.05, confirming a significant difference in the mean ranks among the main factors reported by the respondents. Notably,

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Table 5

*The Total Size of Distance Effects Based on The Euclidean Norm for Negative and Positive Solutions and The Total Size of The Effects*

Tactics	Positive solutions	Negative solutions	Total impact size
T 1	2.086608	0.004799	2.091408
T 2	2.091678	0.007299	2.098977
T 3	2.016603	0.015318	2.031921
T 4	1.963842	0.008718	1.97256
T 5	2.047156	0.009377	2.056533
T 6	2.115555	0.012922	2.128477
T 7	2.166562	0.00038	2.166943
T 8	2.083036	0.011827	2.094863
T 9	2.190293	0.000383	2.190675
T 10	2.054422	0.004234	2.058656
T 11	2.014865	0.03032	2.045185
T 12	1.97238	0.025517	1.997897
T 13	2.212427	0.000404	2.212831
T 14	1.999469	0.033708	2.033177
T 15	2.065911	0.016424	2.082335
T 16	2.034655	0.004968	2.039623
T 17	2.047537	2.021492	4.069029
T 18	2.143629	0.004591	2.14822
T 19	1.98034	0.043924	2.024264
T 20	1.969116	0.015622	1.984738
T 21	1.384985	0.105202	1.490187
T 22	2.094724	0.01061	2.105334
T 23	1.971434	0.038464	2.009898
T 24	1.973103	0.029512	2.002615
T 25	1.995381	0.010625	2.006006
T 26	2.270148	0.902826	3.172974
T 27	2.061315	0.012801	2.074116
T 28	1.876462	0.024255	1.900717

tactics 13 (fixing the exchange rate), 9 (establishing regulations for fruit and vegetable exports), and 6 (revising tariffs on packaging raw materials) obtained the highest mean ranks. This criterion signifies the unequal importance of the results. Furthermore, employing the TOPSIS technique aligned with the research objectives, it was determined that tactics 9 (fixing regulations for fruit and vegetable exports to avoid arbitrary decisions and negative political influences on trade relations), 7 (establishing export incentives such as air transportation subsidies and participation in major international food exhibitions), and 13 (fixing the exchange rate) ranked higher than other tactics due to their

proximity to the ideal solutions.

### Recommendations

According to the final results of the research regarding the tactics and their ranking, the following practical recommendation can be drawn from the research.

#### Main recommendation

It is recommended to implement the strategies of 'sustainable presence in the market' and 'improved entry' via the tactics derived considering their implementation priority by the relevant organizations.

#### Recommendations based on tactics

Regarding the implementation of the strategies obtained in this research, the following

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Table 6

*The Relative Closeness to the Ideal Solution*

Tactics	Relative closeness to ideal solution
T 1	0.002295
T 2	0.003477
T 3	0.007539
T 4	0.00442
T 5	0.00456
T 6	0.006071
T 7	0.000176
T 8	0.005646
T 9	0.000175
T 10	0.002057
T 11	0.014825
T 12	0.012772
T 13	0.000182
T 14	0.016579
T 15	0.007887
T 16	0.002436
T 17	0.4968
T 18	0.002137
T 19	0.021699
T 20	0.007871
T 21	0.070597
T 22	0.00504
T 23	0.019137
T 24	0.014737
T 25	0.005297
T 26	0.284536
T 27	0.006172
T 28	0.012761

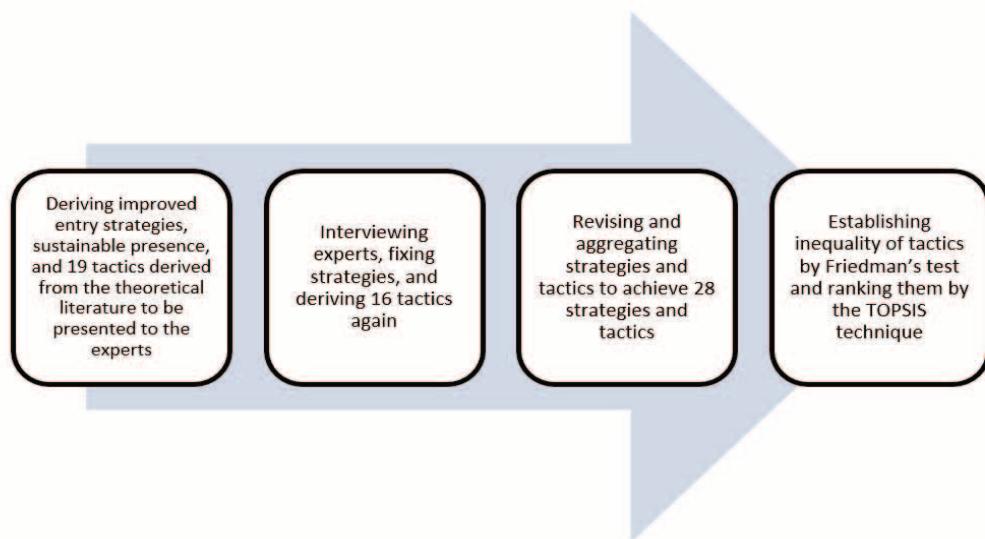


Figure 1. How to Formulate Research Strategies and Tactics

Table 7

The Ranking of the Research Tactics (Tactics)

Rank	Approach No.	Relative closeness to ideal solution	Approach description
1	T9	0.000175	Fixing regulations of fruit and vegetable exports
2	T7	0.000176	Providing export incentives
3	T13	0.000182	Fixing exchange rate
4	T10	0.002057	The joint investment of the private sectors of both sides
5	T18	0.002137	Launching and using the green import corridor of Russia
6	T1	0.002295	Improving transportation infrastructure
7	T16	0.002436	Education
8	T2	0.003477	Mechanization and standardization
9	T4	0.00442	Streamlining by precisely observing executive directorate 98.8.15
10	T5	0.00456	Establishing export consortia
11	T22	0.00504	Establishing preferential customs tariffs by Russia
12	T25	0.005297	Reinforcing shipping lines
13	T8	0.005646	Creating fruit and vegetable export clusters
14	T6	0.006071	Revising tariffs on raw materials for packaging by the government
15	T27	0.006172	Creating processing industries in Russia
16	T3	0.007539	Observing health and quality standards
17	T20	0.007871	Highlighting the role of Iranian Commerce House
18	T15	0.007887	Updating customs information of both sides
19	T28	0.012761	Holding exhibitions of commercial and industrial capabilities of Russia in Iran
20	T12	0.012772	Branding exported commodities
21	T24	0.014737	Sending and accepting commercial delegations and tourists
22	T11	0.014825	Activating commercial relations between the provinces of both countries
23	T14	0.016579	Establishing a bank and branches in both countries
24	T23	0.019137	Canceling the need for visa for the citizens of both sides
25	T19	0.021699	Fixed and long-term pricing
26	T21	0.070597	Production of Iranian fruits and vegetables in Russia
27	T26	0.284536	Creating databases
28	T17	0.4968	Establishing export terminals

practical recommendations can be put forth by expanding the strategies based on the tactics and their priorities:

- 1 Stabilizing regulations of the fruit and vegetable export sector, avoiding ad hoc decisions for export (such as the seasonal prohibition of kiwifruit export), and not involving destructive political decisions in trade relations
- 2 Determining rewards and export incentives, such as subsidy on air transportation and presence in major exhibitions such as international food exhibitions
- 3 Stabilizing foreign exchange rate by internal and external tools, e.g., export insurance or export assurance fund as per the global models
- 4 Encouraging and facilitating joint investment of the private sector by the government for
  - a) production of the final product derived from imports with the franchise and the use of the potentials of the Anzali free zone as the only free zone on the coast of the Caspian Sea
  - b) re-export of commodities produced from imported raw material

c) entry of Iranian commodities to the customs of Special Economic Zone "LOTUS" of Astrakhan using the Russian facilities

d) establishing distribution units in Russia

5 Focusing on launching and using the green corridor (belt) of Russian imports through national agreements, which will reduce a significant part of the cost effect

6 Establishing a proper transportation network to supply equipment requirements (refrigerated containers and ships) through export terminals and the activation of the Dagestan route

7 Holding training workshops on correct and mechanized methods of fruit and vegetable production, export, branding, and packaging for producers and exporters by international institutions such as Jetro for all people involved in the crop export chain

8 Using mechanization and international standards, especially ISO and GAP22000 Haccp, in production and packaging for export to accomplish the goals of waste reduction and crop preservation from the farm (harvest, storage, transportation, and distribution) to fork

9 Streamlining export by observing executive procedures and packaging regulations of Trade Development Organization (directorate 96.8.15) by exporters and monitoring by the Iran National Standards Organization

10 Establishing export consortia to satisfy high-volume needs and avoid fragmented policies on marketing mix factors

11 Obtaining the license to establish preferential customs tariffs by the Islamic Republic of Iran from the Russian Federation, like customs tariffs of other commonwealth countries, e.g., Azerbaijan and Uzbekistan, especially for foods and crops

12 Strengthening cargo and passenger shipping lines and reducing the tariff rate of maritime transportation to reduce costs, increase traffic, and develop tourism for export development

13 Identifying and creating fruit and vegetable export clusters to maintain the added value of the production and supply, and respond to the integrated (general) needs of the target market

14 Revising the tariffs for raw materials needed for packaging (to reduce its impact to about 5% to be equal to global competitors) in order to reduce fruit and vegetable packaging cost

15 Creating intermediary processing industries in Russia to export technical services to Russia, reduce consumer price, and encourage consumer loyalty to domestic goods

16 Observing health and quality standards of fruits and vegetables by exporters (export-focused production based on the target market) and monitoring by the Iran National Standards Organization to reduce waste, stabilize quality, increase consumer loyalty, and increase the value added of the export chain

17 Converting Iranian Commerce House in Astrakhan to a permanent place to exhibit and supply Iranian commodities and creating a permanent negotiation hall in this House for information sharing between the traders of two countries and signing agreements to facilitate provincial, union, and individual actions

18 Updating the customs information of both sides with the Ministry of Industry, Mining, and Trade and the Ministry of Agriculture Jahad within monthly meetings to achieve a unity of procedure with an emphasized role of Trade Development Organization

19 Granting facilities to businessmen and companies with advantages to set up an exhibition of the capabilities in strategic cities in both sides with an emphasis on exchange transactions

20 Creating and using reputable brands to create loyalty in the target market and avoid the packaging of Iranian crops by other brands and intermediary countries, and attention to core competencies of

some Iranian crops such as the healing properties of Mashhad melon, kiwifruits, medicinal plants, and so on

- 21 Increasing and facilitating the dispatch and acceptance of business delegations and tourist tours
- 22 Activating trade relations between Iranian provinces with export advantage and the regions of Russian Federation and using the experiences of the commerce chambers of Iran and its provinces and the joint chambers
- 23 Founding a joint Iranian-Russian bank, opening branches of Russian banks in the Anzali free zone, and reinforcing Mir Business Bank in Astrakhan in terms of the number of branches and the volume of exchanges
- 24 Canceling the need for visa for the citizens of both sides with the priority of merchants and traders, or issuing visas at the destination as the minimum facility
- 25 Laying a platform for exporters through export assurance fund or insurance to sign long-term contracts with a fixed price, taking the tolerance of exchange rate fluctuations into account
- 26 Cultivating and producing Iranian fruits and vegetables in different regions of Russia (overseas agriculture)
- 27 Creating a database to introduce advantageous commodities of Iran to Russia, especially in strategic cities of Moscow, St. Petersburg, and Astrakhan.
- 28 Constructing fruit and vegetable export terminals from Iran to Russia on strategic land and water borders, e.g., Bandar Anzali and Astara

Although this research provides managers and those involved in fruit and vegetable export with a useful instrument for making proper and timely decisions for export, it is suffering from some limitations as mentioned below:

- 1 The practical findings are not published by the relevant organization in successful exporting countries to the target markets, and access is limited to information due

to the non-cooperation of the relevant organizations such as embassies and commerce chambers in information sharing.

- 2 The research considered all fruit and vegetable items as one single item.
- 3 The research considered only fruit and vegetable items in the target market, which is always a part of basic markets for non-petroleum exports, while strategies and tactics may differ for other items.
- 4 The research did not consider general economic costs in export.
- 5 The research did not consider the hidden cost of virtual water export.

The researchers are recommended to conduct further studies on the following topics to supplement the research series on the subject matter of the present work:

- 1 Feasibility study of developing Iranian fruit and vegetable export with an emphasis on exchange markets (such as apple export to and banana import from the Philippines, or raisin export to and banana import from Ecuador)
- 2 Formulating fruit export strategies considering exported crops separately and based on their main features, such as foreign exchange generation and competitive advantage
- 3 Formulating export strategies for other commodities in the target market based on their importance
- 4 Formulating fruit export strategies considering optimal cropping patterns to avoid losses arising from virtual water export
- 5 Formulating export strategies based on total cost-benefit analysis considering final price with such costs as energy subsidy in the production and consumption of national resources)

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### AUTHORS' CONTRIBUTIONS

Rahmatali Saberi Haghayegh: As the researcher and responsible author of the manuscript, Rahmatali Saberi Haghayegh contributed to the conception, design, and execution of the research study. They conducted data collection, analysis, and interpretation, and played a key role in writing and revising the manuscript. Tahmures Hasangholipour served as the research and manuscript mentor, providing guidance and expertise throughout the research process. They offered valuable insights, reviewed and edited the manuscript, and provided critical feedback to enhance the quality of the work. Hashem Aghazadeh contributed as a research and manuscript consultant, offering their expertise and advice in the specific field of study. They provided valuable input and suggestions, reviewed the manuscript, and contributed to its improvement. Mohammad Taleghani also served as a research and manuscript consultant, providing their knowledge and expertise in the research area. They offered guidance, reviewed the manuscript, and provided valuable insights to enhance the research study. Together, the contributions of Rahmatali Saberi Haghayegh, Tahmures Hasangholipour, Hashem Aghazadeh, and Mohammad Taleghani were instrumental in the successful completion of the research study and the development of the manuscript.

### CONFLICT OF INTEREST

The authors state that there is no conflict of interest.

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