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Evaluation of Export Models of Agricultural Products in the North of Zanzan

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Abstract

Nowadays, export growth is a crucial factor in revitalizing the economy of countries. The development of exports ranks high on the list of government priorities and policies in nearly all developing nations. The aim of this study was to present a strategic model for enhancing agricultural product exports from Tarom County and to provide a conceptual framework for such developments. Semi-structured interviews were conducted to gather data, while Strauss and Corbin's methodology was used for data analysis. Sampling was carried out using targeted and snowball methods, which led to interviews with notable experts in the field of exporting agricultural products. During open, axial, and selective coding processes, results obtained from data analysis provided a strategy for developing agricultural product export based on database theorizing approach. Based on systematic database theory approach adopted here; causal factors affecting production include institutional factors (governmental policy and legal), marketing/sales aspects, economic/financial/banking considerations as well as competitive elements; background factors include logistical/infrastructural issues alongside scientific/knowledge-based ones (innovation); intervening factors are cultural/political/international influences; strategies can be short-term/medium-term/long-term approaches while consequences involve macro/micro-level financial/non-financial effects that influence agriculture product export development activities considerably. Results indicate that contextual variables most influential towards improving Tarom's agriculture product exports are maintenance infrastructure availability/distribution network suitability/new technology application/export terminal access/laboratory quality measurement standards adoption/etcetera.

Keywords:

Agricultural products, export development, innovation, marketing, production

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INTRODUCTION

As per economic theories, exporting is a crucial factor that influences job creation within the economy (Jeshari and Esfandiari, 2022). The exportation of manufactured goods results in amplified production which continually generates new demands. These demands further stimulate investments and ensure growth and prosperity in exports once again. Thus, exports lead to direct and indirect employment opportunities across various economic sectors (Badr et al., 2018). The contemporary economic literature has reached an agreement regarding the advantages associated with implementing an economic development approach that focuses on expanding and varying exports (Mania and Rieber, 2019). Furthermore, numerous economic experts have expressed their belief that the trajectory of economic progress rests on the advancement of knowledge-based activities and the creation of innovative products with widespread influence across all production and export sectors (Mir Jalili et al., 2019). Consequently, a shift away from an economy reliant on a singular product has been deemed necessary in light of intense competition within both domestic and international markets. Over the past decade, there has been a concerted effort to break free from this single-product mentality and move towards a multi-product economy by reducing dependence on crude oil sales at the macro level (Jeshari and Esfandiari, 2022). Iran has the potential to cultivate and distribute a wide range of agricultural products across its territory, as evidenced by statistics indicating growth in this sector during various periods. Nonetheless, such progress is often erratic, with export performance falling short of anticipated levels on most occasions. Despite the considerable emphasis placed on non-oil exports within Iran's macro and strategic documents, it appears that executive policies have not prioritized the development of agricultural product exports (Shahmoradi et al., 2019).

At the micro level, there has been a focus on emphasizing provinces with diverse capaci-

ties to harness their potential in various sectors, enabling them to implement policies of resistance economy. Given the vital role played by the agricultural sector in providing sustenance and nourishment across nations, it is considered an essential component of this economic model. Moreover, certain products within this industry are deemed strategic goods, thereby necessitating a range of support and protection mechanisms to regulate their markets while encouraging domestic production. These measures have been adopted by countries around the world but are particularly crucial for developing economies (Bazi et al., 2020).

According to specialists and experts, the significant fluctuations in agricultural product exports that have resulted in a gap between export potential and actual exports are due to various obstacles and factors hindering the development of agricultural product exports. Tajeddini et al. (2015) identified several fundamental impediments facing Iran's agricultural product export industry, including an absence of target market identification, non-membership in the World Trade Organization (WTO), unfavorable business environments, commodity price instability, limited international shipping company presence, and high shipping costs. Furthermore, Shahmoradi et al. (2019) discovered that most agricultural products were exported without packaging or adherence to destination country standards. Abnar et al. (2021) also found that raw product exports were problematic due to exchange rate fluctuations' direct impact on export conditions; strict visa issuance for Iranian businessmen; lack of liquidity compounded by high bank interest rates; delayed payment periods for subsidies and export incentives; absence of brand names from active Iranian companies within international markets; insufficient specialized terminals for exporting agriculture products coupled with communication difficulties between banks regarding currency transfers among other challenges crucially important for Iran's agriculture product

exports as per [Abnar et al. \(2021\)](#).

Presently, a multitude of domestic and foreign scholars have emphasized the significance of expanding exportation in industries related to technology and manufacturing, as well as agriculture and service sectors such as engineering and science. [Ramanayake and Lee \(2015\)](#) supported this notion by asserting that exporting can lead to economic growth due to its potential for fostering various forms of development, including establishing connections between production and demand while entering global markets. Expanding in size, employing superior technologies and harnessing the benefits of learning effects are all key factors that contribute to increased efficiency and improved human resources. Furthermore, privatization and job creation have been shown to enhance productivity. [Edeh et al. \(2020\)](#) stress the importance of investing in a broad innovation strategy as a means of achieving competitive advantage and growth in foreign markets. Similarly, [Rossi et al. \(2021\)](#) emphasize the significance of adopting export strategies based on innovation while also ensuring financial access within a supportive regulatory environment when starting or developing exports.

[Yakovenko and Ivanenko's \(2020\)](#) research highlights the need for diversification within agricultural food exports as an important factor for sustainable economic growth; they argue that development and diversification of high-value-added products contribute significantly to sustainable development within this industry. [Mania and Reiber's \(2019\)](#) findings reflect economists' consensus regarding the advantages associated with an economic development strategy focused on export diversification.

[Malca and Peña-Vinces's \(2020\)](#) research emphasizes examining both export promotion program designs as well as internationalization theories to improve their impact on international development while enhancing export performance; such programs can help exporters expand their knowledge about emerging economies. [Sulaiman et al.'s \(2020\)](#)

study asserts that strengthening trade balance transactions is one crucial policy towards promoting agricultural development by increasing productivity through innovation, expanding agricultural product exports along with its variety, thus widening product market opportunities overall.

Zanjan province, despite its production of high-quality agricultural products, encounters export difficulties. Evidence suggests that Zanjan is not only a hub for heavy metal production but also an agricultural powerhouse. Its strategic geographical location and diverse weather conditions make it highly conducive to agriculture and other sectors' development. With 883,000 hectares of arable land - accounting for 4.77 percent of the country's agricultural land - and annual agricultural output exceeding three million tons, Zanjan's potential for growth is immense.

For this reason, the provincial officials are endeavoring to expand the range of export offerings by augmenting both the quality and quantity of agricultural produce. Tarom County boasts the largest share in Zanjan province's agricultural exports, accounting for 61.5 percent of said products. Its farmers cultivate a wide array of crops that include walnuts, hazelnuts, olives, garlic, celery, peas, pomegranates, figs, apricots and cherries with exceptional skill and care. Of these crops - namely olive oil, pomegranates, figs and cherries - four may be considered potential export advantages. An analysis of the disparity between total exports vs income from same reveals that agricultural products make up an insignificant proportion or less than estimated amounts within overall exports from this region; however given Tarom county's preeminent role in terms of exporting such goods it is clear that there exists considerable untapped potential here despite various weaknesses and challenges faced in this arena.

Today, as per numerous domestic and international scholars, enhancing the export of agricultural products can significantly contribute to the economies of countries with a strong presence in the agricultural industry

(Ben-xi & Zhang, 2020) by stimulating growth and bolstering production. Thus, this study endeavors to bridge the disparity between potential and actual exports by addressing the question of “what factors are crucial for developing an effective strategic model for exporting agricultural products from Tarom County, and what aspects require attention?”

METHODOLOGY

Tarom is a County in Zanzan province, Iran. It is located in the north and shares borders with Guilan, Qazvin and Ardabil provinces. The Qezl-Ozen River has created a deep valley with mountain ranges that reach over 2,800 meters high. Tarom’s population makes up 5 percent of the province and its area share is 10 percent. The river doubles agricultural capabilities, making it a strategic region for olive production at 27 percent of the country’s olives (Shiri & Farbodi, 2022).

This study aims to improve export development for agricultural products and provide a model based on qualitative methods. It is a practical and fundamental approach, using ground theory due to the lack of existing theories in the topic. Ground theory was used to create a theoretical framework for factors affecting agricultural product development, due to the lack of an existing model. This is an exploratory qualitative research using interpretive paradigms.

The data analysis was conducted using a systematic approach consisting of three stages: open, axial, and selective coding. During the open coding stage, the primary concepts were identified by reviewing and organizing interview texts. Similar codes were then grouped into categories. Subsequently, titles representing all codes within each category were selected to identify components related to the development of agricultural exports in Tarom County. In the axial coding phase, relationships between the central phenomenon and other categories and concepts were defined based on a paradigm model. Finally, during selective coding stage, the main variable or basic

process hidden in the data was charted with consideration for its occurrence stages and consequences. The statistical population for this study encompasses a diverse group of individuals, including policymakers and government officials from the Agricultural Jihad Organization, officials from the Agricultural and Natural Resources Research Center, top experts from the Investment Services Center, members of the Chamber of Commerce, and members of private merchants’ unions in Tarom County who are involved in exporting companies. Additionally, entrepreneurs and owners of conversion industries as well as those dealing with supplementary agricultural products in Tarom County are also part of the population under consideration. All these individuals have at least a bachelor’s degree and possess more than five years of management experience.

To ensure an adequate sample size for the study, the researcher initially identified two experts using targeted sampling methods. Subsequently, using snowball sampling techniques, this number was increased to 40. Going forward, it is planned to continue increasing the sample size until reaching theoretical saturation limits. The use of snowball sampling methods will be employed to achieve this goal. This approach will allow us to capture a broad range of perspectives from across our diverse statistical population while ensuring that our research is both comprehensive and robust.



Figure 1. Tarom County Location

RESULTS AND DISCUSSION

The majority, constituting 43 percent, fell within the age range of 35-45 years. Gender distribution was balanced, with an equal representation of male and female experts, each comprising 50 percent. A significant portion, totaling 68 percent, possessed a master’s degree. In terms of occupational sectors, 52 percent of experts were employed in the public sector. Additionally, 48 percent reported a work history spanning between 10 and 20 years. When considering professional levels, 57 percent of the experts were categorized as being at the expert level, while 28 percent held positions at the middle manager level.

Challenges and obstacles facing export development

The initial inquiry on the survey form inquired about the primary hindrances impeding the progress of exporting eight specific agricultural products within Tarom. In reaction to this query, a total of forty distinguished professionals hailing from both public and private domains situated in Zanjan province and Tarom County submitted their

respective sector-specific challenges via the designated questionnaire format, culminating in extraction of definitive codes.

According to the data presented in Table 2, the experts identified a total of 490 distinct obstacles across 9 categories. Following screening, analysis, and summarization, a total of 63 primary challenges were identified. These encompassed 10 challenges related to production barriers, 9 challenges linked to marketing and sales, 9 challenges associated with institutional barriers (governmental, legal, and regulatory), and 8 challenges connected to scientific, knowledge, and technological barriers. Additionally, 7 challenges were categorized as political and international, 6 as infrastructural, 5 as economic, 5 as cultural, and 4 as competitive challenges.

The survey’s second question inquired: “What are the causal factors influencing the development of exports for 8 agricultural products in Tarom County?”

According to the data provided in Table 3, experts identified a total of 251 distinct causal factors across 5 categories. Following

Table 1
Descriptive Information of the Respondents

Indicator	Variable	Frequency	Percentage (%)	Cumulative percentage (%)
Age (year)	25- 35	13	32	32
	35-45	17	43	75
	45-55	8	20	95
	55 <	2	5	100
Gender	Male	20	50	-
	Female	20	50	-
Education	Bachelor’s degree	7	17	17
	Master’s degree	27	68	85
	PhD student and Ph.D	6	15	100
Representation of the department	Public	21	52	-
	Private	19	48	-
Experience (year)	10 >	13	32	32
	10-20	19	48	80
	20 <	8	20	100
activity level	The expert	23	57	-
	Operational manager	4	10	-
	Mid-level manager	11	28	-
	Chief	2	5	-

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Table 2

Analysis of the Findings Related to the First Question of the Expert Questioner

All kinds of obstacles	Number of main challenges	Number of sub-challenges and obstacles counted by the experts
Obstacles to the production of products	10	96
Obstacles to marketing and selling products	9	84
Institutional (governmental, legal and legal) barriers to production and trade	9	68
Scientific, knowledge and technological barriers to production and trade	8	47
Political and international obstacles to production and trade	7	33
Infrastructural and logistic barriers to production and trade	6	51
Economic and banking obstacles to production and trade	5	48
Cultural barriers to production and trade	5	34
Competitive barriers to production and trade	4	29
Total	63	490

Table 3

Analysis of the findings related to the second question of the expert questioner

Causal factors	Main factors
Factors affecting production	Timely supply of high-quality inputs - agricultural holdings and production cooperatives - lack of suitable cultivation pattern - modern conversion industries and industrial clusters - organic production and according to national and international standards - production cost management - knowledge and expertise of the farmer - utilization From mechanization in production - new methods of irrigation - capital and financial resources of farmers and producers.
Institutional factors (governmental, legal and legal)	Laws facilitating and removing legal obstacles to production and export - management and strategic planning for the export of agricultural products - continuous and all-round support of the government to farmers, producers and merchants - export incentives, including tariffs and customs duties - improving the administrative processes of cross-border trade - Coordination and cooperation of the public and private sectors in the matter of product pricing, production and export - arrangement of agricultural product insurance - agreed and non-mandatory pricing
Marketing and sales factors	Packaging according to the taste of the target market - appropriate branding - appropriate advertising and information - target market research - new marketing methods and practices - holdings and specialized companies for marketing and export - specialized manpower, with experience and skills in marketing and business.
Economic, financial and banking factors	Various financing support packages, Targeted and low interest to farmers, producers and traders - Stability of macroeconomic parameters - Investment incentives - Targeting of appropriate subsidies and subsidies.
Competitive factors	Appropriate and competitive pricing of export products - import management to maintain competitiveness - supply of high quality, diverse and different products from competitors.

the processes of screening, analysis, and summarization, a total of 33 primary factors were discerned. Among these 33 factors, the most prominent were 10 factors associated with influences on production, followed by 8 factors related to institutional considerations

(governmental, legal, and regulatory). Additionally, there were 7 factors impacting marketing and sales, 5 factors of an economic, financial, and banking nature, and 3 factors categorized as competitive.

The third question on the survey form in-

Table 4

Analysis of Findings Related to the Third Question of the Expert Questioner

Background factors	Main factors
Infrastructural and logistic factors	Storage and storage infrastructures (warehouse and cold storage) - export terminals and suitable distribution networks - safe and international combined transport network - new and new transport fleet for agricultural products - establishment of quality and standard assessment laboratories in the province
Effective scientific, technological and knowledge factors (innovation)	Conducting practical and scientific researches and using its achievements in production and trade - using new technologies and applications (applications) in production to trade - training, promotion and skill enhancement of production methods with new technologies to farmers through face-to-face methods and offline - training, promotion and skill enhancement of new processing and production methods through face-to-face and non-face-to-face methods - training, promotion and skill enhancement of new marketing and sales methods and e-commerce through face-to-face and non-face-to-face methods, Training of specialist and professionals in the field of production and trade

Table 5

Analysis of Findings Related to the Fourth Question of the Expert Questioner

Interfering factors	Main factors
Cultural factors	Getting to know the culture and tastes of the target countries - Creating new attitudes in farmers and producers - Encouraging farmers to cultivate export varieties - Encouraging farmers to create added value - Production culture related to export
Political and international effective factors	International negotiations and active economic diplomacy - reduction of national and international tensions - cooperation of the banks of the parties for quick transfers and currency exchanges - the economic situation of the importer

quired: “What are the underlying factors influencing the development of exports for 8 agricultural products in Tarom County?”

Referring to the data presented in Table 4, experts identified a total of 93 distinct land factors distributed across two categories: infrastructural-logistic factors and scientific and technological factors. Following the processes of screening, analysis, and summarization, 11 primary factors were delineated. Among these 11 factors, 6 were associated with scientific, technological, and knowledge considerations, while the remaining 5 were linked to infrastructural and logistic factors.

The fourth question on the survey form queried: “What are the influential intervening factors affecting the development of exports for 8 agricultural products in Tarom County?”

Drawing insights from Table 5, experts presented a total of 44 distinct intervening fac-

tors, categorized into cultural and political factors. Subsequent to screening, analysis, and summarization, a total of 9 primary factors emerged. Among these, 5 factors were attributed to cultural considerations, while the remaining 4 were associated with political and international factors, deemed as the most significant.

The fifth question on the survey form inquired: “What are the export development strategies for 8 agricultural products in Tarom?”

Referring to the data in Table 6, experts presented a comprehensive set of 187 strategies classified into three categories: short-term, medium-term, and long-term. Following thorough screening, analysis, and summarization, a total of 28 primary strategies were identified. Among these, 12 were designated as short-term strategies, 10 as medium-term

Table 6

Analysis of Findings Related to the Fifth Question of the Expert Questioner

Export development strategies	Main factors
Short term	Using the experiences of organizations in decision-making bodies - Creating relevant cold storage - Product packaging training - Facilitating customs laws - Incentive platforms for exporters - Development of transport fleet - Supporting farmers to produce quality products by providing cheap facilities for purchase Equipment - guaranteed purchase - use of specialized and practical forces>
Midterm	Creating a special brand for the province - Creating export terminals - Using advanced tools and technologies - Establishing large export companies - Timely supply of tools and inputs needed by farmers - Supplying the required capital - Advertising at the national macro level for the city - degree Classification of products by sorting - development of industrial and modern activities - supply of goods in the agricultural products exchange
Long time	Formulating the cultivation model and the obligation to comply with it by farmers - organizing the production of agricultural products - producing organic products - study, review and finally detailed scientific planning regarding the production of products at a high level that can be competitive in the world market - integration of agricultural lands/ Development of gardens in national lands- Having universities and specialized schools related to agricultural products- Necessary infrastructure for informing and knowledge of farmers- Creating value chains of agricultural products>

strategies, and 6 as long-term strategies.

The sixth question on the survey form queried: "What are the consequences of developing the export of 8 agricultural products in Tarom County?"

Drawing from the data presented in Table 7, experts outlined a comprehensive list of 253 consequences, categorized into financial and non-financial consequences. Following meticulous screening, analysis, and stigmatization, a total of 30 primary consequences were identified. Among these 30 factors, 15 were designated as financial consequences, and the remaining 15 were recognized as non-financial consequences, highlighting their significance in the overall context.

DISCUSSION

In today's globalized world, companies have no other way to increase their competitiveness than to develop and improve their products. In order to develop the export of agricultural products, the government should improve its trade relations with other countries, especially the countries of the region, and shift its perspective from import-oriented to export-oriented.

In the explanation of infrastructural and lo-

gistic development, the export of products by giving importance to the category of maintenance and storage infrastructure has increased the price of products, which will increase the image and credibility of products at the international level. The creation of specialized export desks will increase the efficiency and effectiveness of activities related to export development and marketing of agricultural products, and this activity will be concentrated in the target markets and for products that have greater export potential.

By spreading and promoting the culture of production for export by the government and introducing the positive effects of this culture to the managers of the production-export units and consequently promoting this culture among the experts of the production and conversion units by the managers and providing the necessary training for the producers of agricultural products to produce products With global standards, by complying with environmental standards and applying policies by the relevant bodies to prevent the wastage of products during peak production, it is possible to boost the production and export of agricultural products.

Due to the fact that the price of energy and

Table 7
 Analysis of Findings Related to the Sixth Question of the Expert Questioner

Consequences		Main factors
Financial	Micro level Business operators	Increasing related bank facilities - increasing the income of merchants and increasing profits - trading and receiving more orders and increasing competition / getting more market share - directing private sector capital to the export sector and quick return of capital
	Farmers	Increasing sales at a good price and making a good profit - creating incentives for producers, increasing the area under cultivation and productivity - increasing the income of farmers and reducing the income gap between cities and villages - reducing the Gini coefficient - improving the livelihood and economic power of farmers
	Macro level City, province, country	Improving the country's economic ranking in the world, especially agriculture - foreign exchange - increasing the added value of the province's agricultural sector - reducing the unemployment rate or increasing direct and indirect urban and rural employment - increasing the national gross income - increasing the share of non-oil exports and non-oil revenues - more investment in the agricultural sector - Reducing inflation and costs
Non-financial	Micro level Business operators	International trust in Iranian businessmen - increasing the bargaining power of businessmen - promoting the businessmen of the province - encouraging businessmen to work in this field - creating a culture of exporting agricultural products - empowering businessmen - improving knowledge and skills
	Farmers	Improving the level of farmers' knowledge - Empowering farmers/Welcoming technology and mechanization in production - Increasing the spirit of cooperation and cooperation - Encouraging the production of standard and quality products - Farmers' satisfaction with cultivation - Farmers' social welfare - Improving people's welfare
	Macro level City, province, country	More credibility for the province through the introduction of manufactured products in international markets and export goals - improving international competitiveness - increasing the security of food production and self-sufficiency in the country - job security - strengthening the regional production chain - urban development - improving the cultivation pattern - tourist attraction

labor in our country is low, but due to the lack of modern technologies, the cost of goods has increased and it takes the power of competition from our exporters. On the one hand, economic sanctions are the source of many exporters' technological lags, and on the other hand, due to the high production costs, the export of agricultural products does not have enough power to introduce advanced technologies and invest for the development of exports.

Competitive advantage depends on factors

such as quality, innovation, efficiency, and responsiveness to customers. In order to gain a competitive advantage in international markets, any company must have at least one of the above factors that differentiate it from its competitors and customers can understand this distinction.

CONCLUSION

The examination of agricultural export challenges underscores the significance of addressing the critical issues hindering the

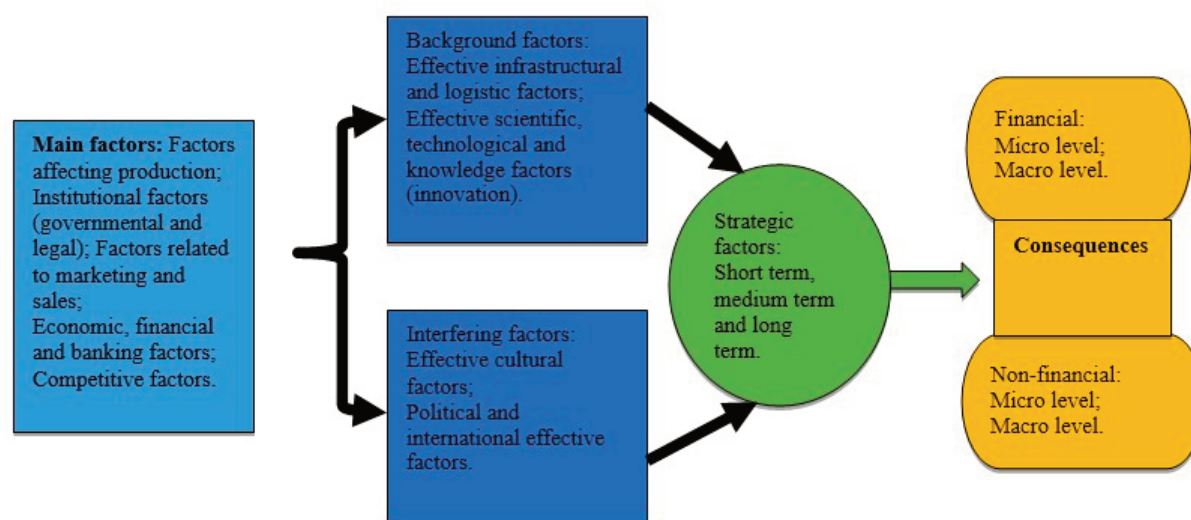


Figure 2. Evaluation of Export Models of Agricultural Products in the North of Zanjan

development of the agricultural sector in Tarom. The lack of efficient institutions and the dispersion of support and policies emerge as major obstacles. Recognizing the pivotal variables identified in this research, it is imperative for the government and sector officials to focus on factors influencing agricultural product exports. Redirecting strategic policies towards boosting agricultural exports is essential to achieve goals such as self-sufficiency, food security, increased employment, and global market mastery.

Drawing insights from the analysis of agricultural exports in Tarom County compared to leading agricultural exporting countries, the following strategic suggestions are proposed:

Key Factors for Export Development: Prioritize factors including cultivating suitable patterns, integrating modern transformation industries, efficiently managing production costs, ensuring timely supply of high-quality inputs, streamlining laws, and removing legal obstacles. Improve administrative processes, tailor cross-border trade and packaging to match target market preferences, establish proper branding, conduct thorough target market research, and offer diverse, targeted, and low-interest financing support packages for farmers. Implementing appropriate and competitive pricing for export products and ensuring the supply of quality manufactured

goods will have a direct impact.

Background Factors for Development: Address critical background factors such as maintaining and enhancing storage infrastructure for export terminals, establishing robust distribution networks, and incorporating new technologies into production.

Intervening Factors: Recognize and address cultural, political, and international factors by fostering familiarity with the culture and tastes of target countries, instilling new attitudes in farmers and producers, engaging in international negotiations, practicing active economic diplomacy, and mitigating national and international tensions, considering the economic situation as an importer.

Export Development Strategies (Short, Medium, and Long Term): Implement strategies including leveraging organizational experiences in decision-making institutions, establishing cold storage facilities, creating a distinctive provincial brand, constructing export terminals, and ensuring the timely supply of tools and inputs.

Farmer Requirements: Enforce the formulation and compliance with cultivation patterns among farmers, organize agricultural product production efficiently, and promote the production of organic products.

Implementing these strategic recommendations will position Tarom for sustainable agricultural export development, contributing to

broader socioeconomic objectives.

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CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

AUTHORS' CONTRIBUTIONS

1) Conceptualization, Methodology, Supervision, Validation, Writing - Original draft preparation in the English language.

2) Field data collection, Statistical data analysis, writing the first draft in Persian.

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