



Article

The Global Importance of Fruit and Vegetable Enterprises and The State of Development in Uzbekistan

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Abstract: The article explores the globalization of the fresh fruit and vegetable (FFV) industry, highlighting the emergence of a few transnational firms, particularly in the distribution segment, which is significantly capital- and energy-intensive. The study identifies the industry's structure as comprising three segments—production, distribution, and marketing—where distribution shows the highest degree of transnationalization. The analysis draws attention to Uzbekistan's robust natural and climatic conditions, enabling sustainable development of its fruit and vegetable sector, which accounts for 7% of GDP and 27% of agricultural production. Recent reforms and policy measures in Uzbekistan, such as the establishment of clusters and investment in export-oriented crops, have strengthened the sector's competitiveness. The article concludes with recommendations for improving efficiency and sustainability, emphasizing innovative technologies, expanding export markets, developing the processing industry, and promoting agrotourism.

Keywords: Fresh fruit and vegetable industry, Globalization, Transnational firms, Fruit and vegetable clusters, Sustainable development, Export markets, Processing industry, Innovative agricultural technologies, Agrotourism.

1. Introduction

The basic argument of this article is that, as the globalization of the FFV(Fresh fruit and vegetable) industry has begun, a handful of firms have emerged that have become transnational, although they are much smaller than firms in larger-scale industries such as automobiles, where not only the industry is globalized, but the various firms within the industry are themselves global in character, even if many of them still have a national base.

In the production and handling of fresh fruits and vegetables from producer to consumer, we defined three basic segments: producers, those who directly produce the product; marketers, those who handle the product to consumers (including retailers and food service); and distributors, those who serve as intermediaries between producers and marketers.

Three distinct elements characterize the fresh fruit and vegetable industry. First, the industry consists of three separate segments, only one of which, the distribution segment, is truly transnationalized. The other two segments, production and marketing, though showing a few tendencies toward transnationalization, lean more toward a localized, regional, or national character.

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Second, the distribution segment of the industry is probably highly concentrated, even if, at the moment, there are few data available on the degree of concentration. The trade literature makes clear that only a handful of firms have established a global presence. That presence is demonstrated through (1) advertising and news reports in trade publications, (2) news reports on financial pages, and (3) word-of-mouth comments by individuals involved in the industry. There are, in addition, a significant number of "wannabe" firms (i.e., that want to be big and transnational). I have identified only a few firms as major players in the industry, but there are probably another dozen wannabe firms.

Third, there is significant variation in history, size, and internal structure of the firms involved in FFV distribution. One major characteristic differentiates the four or five largest firms-whether they had a banana base historically or are new firms, either without a banana base or in the process of developing one.

The FFV industry-production, distribution, and marketing-can be conceptualized in the shape of a dumbbell, with production and marketing being the two large weights on each end connected by the narrow channel of distribution. This metaphor conveys several ideas. First, production and marketing are much larger than distribution in terms of the numbers of people involved. Distribution, in contrast, is very capital- and energy-intensive, requiring trucks, airplanes, and ships, all with refrigeration capacity. It is also the system that deals with physically distant spaces, transporting fresh fruits and vegetables between continents over thousands of miles.

A somewhat different diagram might be drawn if value added were used instead of numbers of workers involved. In the United States, for example, if we use the value-adding data provided by R. Brian How (1991=79), what is referred to as the distribution segment becomes far more important. Thus, How values production (domestic and imported) at US\$12.2 billion and what I refer to as marketing at \$18.41 billion. How's three categories of shipping-point operations, long-distance transport, and wholesaling, which are approximately equivalent to my category of distribution, are valued at \$13.47 billion. Of the total value-added activity, production accounts for 27.7 percent, marketing for 41.8 percent, and distribution for 30.6 percent.

2. Materials and Methods

This study utilizes a combination of qualitative and quantitative methods to analyze the structure, dynamics, and trends of the fresh fruit and vegetable (FFV) industry, with a specific focus on Uzbekistan. Primary data sources include government resolutions, policy documents, and statistical reports from Uzbekistan's agricultural sector. Secondary sources comprise academic literature, trade publications, and global market analyses. The study employs comparative analysis to assess Uzbekistan's fruit and vegetable industry against global benchmarks, focusing on production, distribution, and marketing segments. Statistical tools were used to evaluate growth rates, export volumes, and the contributions of fruit and vegetable enterprises to GDP and agricultural production. The research also incorporates case studies of agricultural clusters and cooperatives, highlighting best practices in production, processing, and export-oriented activities. Findings are contextualized within broader discussions on globalization, sustainable development, and innovative technologies in agriculture.

3. Results

The global fruits & vegetables market size was valued estimated at USD 733.87 billion in 2023 and is expected projected to expand grow at a compound annual growth rate (CAGR) of 5.0% from 2024 to 2030. Consumers, especially millennials and working professionals, are increasingly opting for online grocery shopping owing to its advantages, including convenience and doorstep delivery. Online grocery shopping allows customers to order fresh produce from the comfort of their homes, eliminating the need for time-

consuming trips to physical stores. This convenience especially appeals to older adults with mobility issues who prefer to avoid crowded shopping environments.

Table 1. The biggest importers and exporters of fresh food and vegetable products in 2023.

No	Exporter country	Export value (thousand dollars)	Imported country	Import value (thousand dollars)
1	United States of America	14865303	United States of America	24218490
2	Spain	10612531	China	18749705
3	Mexico	8732175	Germany	12649751
4	Netherlands	8556638	Netherlands	8268037
5	Viet Nam	7018361	France	6762457
6	Thailand	6895677	United Kingdom	6153455
7	Chile	6670894	Canada	5625829

It is known that the existing natural and climatic conditions in our country allow for the sustainable development of agricultural products, in particular, fruit and vegetable growing. In particular, a number of comprehensive measures have been implemented and a legal framework has been formed to expand the types and assortment of finished products produced at enterprises, sell them in foreign markets, as well as provide comprehensive support for the investment and export activities of enterprises in the sector.

In particular, our country is carrying out consistent reforms in the field of agricultural reform, development of fruit and vegetable enterprises, increasing the volume of production and export potential, and ensuring food security. In particular, the Resolution of the President of the Republic of Uzbekistan No. PQ-4549 dated December 11, 2019 "On additional measures to further develop the fruit and vegetable and viticulture sector, create a value-added chain in the sector" sets out the issues of increasing the production of high-value-added products in the fruit and vegetable and viticulture sector, increasing export volumes, developing unused and fallow lands, increasing the planting of export-oriented agricultural crops in areas that are being reduced from cotton and grain, as well as establishing the effective use of the potential of gardens, vineyards and greenhouses. Also, the Resolution of the President of the Republic of Uzbekistan dated March 14, 2019, No. PQ-4239, "On measures to develop agricultural cooperation in the fruit and vegetable sector," sets the goals of encouraging the creation of a value-added chain in the fruit and vegetable sector, ensuring the production and stability of quality fruit and vegetable products, expanding the financial capabilities of producers of these products, and increasing the competitiveness of production.

Analysis and results. Our country has favorable natural climatic conditions for growing many types of fruit and vegetable products. Agriculture is one of the main sectors of the country's economy.

Table 2. Main indicators of agricultural sector of Uzbekistan.

Years	Agricultural output value billion soums	From that:		Growth rate of agricultural production	From that:	
		farming	livestock		farming	livestock
2014	81794,3	43194,3	38600,0	106,3	105,9	106,7
2015	99604,6	55429,0	44175,6	106,1	105,5	106,9
2016	115599,2	61754,8	53844,4	106,3	105,7	107,0
2017	148199,3	83303,6	64895,7	101,0	98,2	104,1
2018	187425,6	98406,4	89019,2	100,2	95,8	105,7
2019	216283,1	111904,5	104378,3	103,3	104,8	101,6
2020	250250,6	123858,8	126391,8	102,7	103,2	102,1
2021	303415,5	152130,4	151285,1	103,9	104,3	103,5
2022	345191,7	177962,7	167229,0	103,6	103,8	103,3

The production of agricultural products in our country is increasing year by year. At the end of 2022, the volume of products produced in the sector amounted to 345191.7 billion soums, reaching a growth rate of 103.6%. This figure has increased 5 times compared to 2018.

Fruit and vegetable growing is an important component of the agricultural sector of Uzbekistan and is one of the most profitable activities for both farmers and farms. Fruits and vegetables with high nutritional value, unique taste characteristics, and known in world markets are grown on the land of Uzbekistan. The fruit and vegetable growing sector accounts for about 7 percent of our country's GDP and 27 percent of agricultural products.

Table 3. Analysis of fruit and vegetable products grown on all categories of farms in the Republic of Uzbekistan (thousand tons).

Years	Vegetables	Fruits	Nuts	Subtropical fruits	Berries	Sitrus fruits
2014	8753,9	2306,5	74,1	132,5	8,7	3,5
2015	9390,0	2467,9	87,3	141,3	10,0	4,8
2016	10184,0	2612,9	99,4	160,2	11,2	5,8
2017	10219,9	2614,9	111,0	142,6	11,0	3,5
2018	9760,3	2706,2	85,7	163,3	8,2	11,9
2019	10215,1	2752,7	90,6	190,4	11,0	9,5
2020	10020,2	2812,6	111,6	198,2	13,4	10,0
2021	10850,2	2852,6	108,6	197,8	14,1	9,9
2022	11162,9	2999,3	109,1	186,7	12,5	10,6
2023	11553,7	3121,7	104,3	173,1	13,7	11,2

The results of the analysis show that the fruit and vegetable sector in our country is growing year by year. Compared to 2014, in 2023, vegetables will grow by 131.98%, fruits and berries by 135.34%, nuts by 140.75%, subtropical fruits by 130.64%, berries by 157.47%, and citrus production by 320%.

Currently, Uzbekistan provides about 96% of its average annual need for fruits and vegetables from its own production. Currently, the country ranks 2nd in the world in apricot production, 3rd in carrot production, 4th in cherry production, 7th in cucumber production, and 8th in cherry and fig production. The main types of fruits and vegetables imported into the country are potatoes, bananas, citrus fruits, apples, legumes, dates, etc.

With the increasing population and the increasing attention paid to food security issues around the world, the demand for agricultural products, including food products, is increasing.

Table 4. Distribution of fruit and vegetable growing clusters operating in the republic by region

Regions	Number of clusters	Number of farms	Total cluster land area
Republic of Karakalpakstan	13	395	5183
Andijan region	14	1312	11214
Bukhara region	5	136	2738
Jizzakh region	12	1125	14968
Kashkadarya region	8	306	3730
Navoi region	7	105	3313
Namangan region	13	961	16299
Samarkand region	13	2920	21848
Surkhandarya region	13	385	5047
Syrdarya region	6	111	2847
Tashkent region	18	727	13301
Fergana region	19	1387	11537
Khorezm region	6	209	891
Total	147	10079	112916

The table shows that the largest number of fruit and vegetable clusters is located in the Fergana and Tashkent regions. This indicates that the region has favorable conditions for the cultivation, preparation, transportation, storage and processing of products, as well as their sale in domestic and foreign markets. The highest share of farms included in the clusters is located in the Samarkand region. This indicates that there are conditions for effective operation through the widespread introduction of modern, intensive and resource-saving technologies for the cultivation, preparation, storage and processing of products.

Our government organizes the provision of material and technical resources, including seeds, seedlings, mineral fertilizers, and the provision of necessary agrotechnical services to enterprises producing fruit and vegetable products.

Also, taking measures to guarantee the purchase, processing, storage, and delivery of fruit and vegetable products grown by the population to domestic and foreign markets by involving enterprises and agro-industrial clusters engaged in preparation, processing, and export will help increase the competitiveness of enterprises in the sector.

Fruit and vegetable exports in Uzbekistan are of great potential. Today, more than 80 types of agricultural products grown in the Republic are exported to 71 countries of the

world. In countries that are Uzbekistan's trading partners, grapes, apricots, cherries, onions, cabbage, and other products are in high demand.

In 2023, more than 100,000 fruit and vegetable products were exported. Exports included grapes worth \$86.5 million, cabbage worth \$30.5 million, peaches worth \$67.2 million, tomatoes worth \$44.0 million, melons and watermelons worth \$40.0 million, dried plums worth \$45.1 million, onions worth \$61.2 million, cherries worth \$52.9 million, and apricots worth \$40.7 million.

4. Discussion

The scientific and theoretical foundations for assessing the prospects for sustainable development of agriculture, in particular, the fruit and vegetable sector, were studied by foreign scientists such as D. Byerlee, Adeel R.A., O.A. Buryanova, M.M. Butakova, I.F. Khiskov. Also, examples of state regulation in this area of production, cooperation and integration in ensuring the sustainability of fruit and berry subcomplex enterprises were studied.

The necessity and importance of fruit and vegetable enterprises have also been studied by our country's scientists. M. Mannopova's research highlighted the importance of fruit and vegetable clusters in the agricultural sector, issues of improving the management mechanisms of fruit and vegetable clusters. Also, the importance of implementing agrarian policy in deepening reforms aimed at the cultivation and processing of agricultural products was indicated. Issues of improving organizational and economic mechanisms for managing fruit and vegetable clusters are highlighted.

A.M. Kadyrov's research studies the impact of increasing the competitiveness of the national economy on the basis of effective organization of production, processing, storage and export stages in the fruit and vegetable sector. Proposals and recommendations for increasing the competitiveness of the fruit and vegetable sector of our country have been developed.

Theoretical aspects of statistical analysis of the activities of fruit and vegetable farms, a system of statistical indicators and their practical application are discussed in this article. The stages of statistical analysis in farms specializing in fruit and vegetable growing, statistical indicators and main tasks are given. The development of farms specializing in fruits and vegetables and their specific characteristics of their activities, development trends, identified problems, existing methods of solving these problems and factors for the modernization of the fruit and vegetable sector were analyzed in detail in the research of A.S. Khodjaev.

Directions for the development of fruit and vegetable enterprises are based on the experience of fruit and vegetable cooperatives in our republic. The experiences of foreign countries in organizing fruit and vegetable cooperatives in the region were studied by Sh. Fayziyeva and others.

5. Conclusion

The need for fruit and vegetable enterprises is important for strengthening national food security and ensuring economic development. The main need for fruit and vegetable enterprises can be expressed as follows: production of natural and high-quality products, delivery of products to markets, use of environmentally friendly technologies, storage and processing of products, ensuring food safety.

The introduction of innovative agricultural technologies, namely the use of irrigation systems, high-yielding seeds and quality fertilizers, is important for enterprises. In expanding the possibilities of exporting fruits and vegetables to international markets, enterprises should constantly attract labor and qualified specialists, which will also have a positive impact on the labor market.

In conclusion, fruit and vegetable enterprises produce important food products for people, and their efficiency makes a significant contribution to economic stability and a healthy lifestyle.

In our opinion, the following are of great importance in the development of fruit and vegetable enterprises.

1. Expanding export markets: There is an opportunity to enter new markets by improving the quality of products and adapting them to international demand. The demand for environmentally friendly and organic products is increasing in the global food market, which creates a good opportunity for businesses.

2. Introducing innovative technologies: The use of modern technologies, in particular, water-saving irrigation methods, high-efficiency fertilizers, and genetically improved seeds that increase yield, will help increase efficiency in the fruit and vegetable sector.

3. Developing the processing industry: Added value can be created by expanding the fruit and vegetable processing industry. This will increase the shelf life of the products produced and develop new markets.

4. Sustainability and ecology: Applying the principles of sustainable agriculture is important for ensuring the long-term development of fruit and vegetable enterprises. Avoiding environmental damage and saving resources will be of great importance in the future.

5. Agrotourism and cooperation: Cooperation between small farmers and the development of agrotourism are also promising areas, which not only support the local economy, but also attract foreign tourists. In general, the prospects for fruit and vegetable enterprises depend on the application of technologies, meeting international requirements, and developing strategies aimed at sustainable development.

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