2. The accession of Uzbekistan to the world trade organization: challenges and opportunities for the food processing industry

The present article is based on the research paper "Uzbekistan's Accession to the World Trade Organization: Challenges and Opportunities for the Food Processing Industry" conducted by the Economics Department of the National University of Uzbekistan with the financial support of the USAID's Economic Policy Reform Project in Uzbekistan. The authors of the research work are A. V. Vakhabov – professor, doctor of economic science (head of the research team), N. G. Muminov – candidate of economic science, F. A. Djurakhanov and A. A. Karimov. The coordinator of the research work was K. T. Akhmetov. The complete version of the present research is available at the project site: www.bearingpoint.uz

Introduction

Uzbekistan possesses huge resources of raw materials for the development of food processing industry and great potential for agricultural produce processing. The natural and climatic conditions of the country provide ample opportunities for the development of fruit and vegetable production (*for example: the average sugar content of grapes worldwide amounts to 12%, but in Uzbekistan it is 18%).* Further integration of the economy of Uzbekistan into the world economy and its accession to the World Trade Organization requires in-depth study of the methodical and practical issues of the country's strategy for achieving a smooth accession to the WTO, taking into consideration world experience. The main goal of this study is to provide a complex analysis of the qualitative and quantitative consequences for the food processing industry resulting from the accession of Uzbekistan to the WTO.

Despite the decrease in the growth rate of production, the food industry still plays a key role in the economy of the country. According to our calculations for the period of 2000-2004, the weight of the food industry in the structure of GDP, gross industrial output, and the total volume of exported and imported produce has decreased. For example, if the gross output of the food industry in 2000 amounted to UZS 250.3 billion, or 1.9 % of the country's GDP, employing 117.4 thousand people, then in 2004 the gross output of food processing industry reached UZS 774.9 billion or 1.6% of GDP, and employed 95.6 thousand people (Table 1.). At the same time, the number of economic entities operating in the food industry is growing steadily. In 2002 there were 3352 enterprises operating in the food industry, and in 2004 this indicator reached 3646 units.

Table 1. Status, Structure and Dynamics of Food Industry Development

The share of the food industry in the structure of GDP, industry, employment and commodity composition of exports and imports of Uzbekistan (in %)

	2000	2001	2002	2003	2004
GDP	1.9	1.8	2.1	1.9	1.6
Industry	13.3	12.6	14.3	11.7	9.6
Employment	1.3	1.3	1.2	1.1	1
Exports	5.4	3.9	3.5	2.7	3.8
Imports	12.3	10.8	12.5	9.9	6.8

Source: The State Statistics Committee of Uzbekistan.

From 2000-2004 the weight of the food processing industry in the total structure of industrial enterprises increased from 24.9% in 2000 to 25.9% in 2004 (Table 3).

Table 2. Share of Enterprises of Industries of the Republic of Uzbekistan (in % to total)

	2000	2001	2002	2003	2004
Industry, Total	100	100	100	100	100
Power	0.5	0.6	0.5	0.5	0.4
Fuel	0.2	0.2	0.3	0.3	0.3
Metallurgy	0.6	0.7	0.7	0.6	0.6
Mechanical Engineering	24.2	24.2	23.3	22.6	22.3
Light	12.6	13.7	15.5	16.1	15.6
Food Processing	24.9	24.1	24.8	24.5	25.9
Chemical and Petrochemical	2.7	3	3	3.4	3.9
Building Materials	14.9	14.6	19.3	13.6	13.1
Other	19.4	18.9	12.6	18.4	17.9

Source: The State Statistics Committee of Uzbekistan.

One of the main indicators of food processing enterprises' successful operation is capacity utilization ratio. In 2004 the capacity utilization at the following enterprises of the food processing industry were as follows: non-alcoholic beverages – 16%, macaroni – 35,6%, grape wines – 37,7%, margarine – 38,2%, processed fruits

and vegetables – 40,2% (table 3). This indicates the existence of a large growth potential of the food processing industry in future.

Table 3. Capacity Utilization at food processing enterprises (%)

	1995	2004
Processed fruits and vegetables	58,3	40,2
Confectionary	16,1	50,3
Macaroni	20,3	35,6
Grape wines	53,8	37,7
Margarine	47,3	38,2
Vodka and alcoholic beverages	48,9	76,8
Non-alcoholic beverages	16,2	16,0
Flour	59,1	53,5

* Source: The State Statistics Committee of Uzbekistan

Dynamics of Domestic Production, Imports and Exports of Food Processing Industry Commodities. An analysis of the physical volume of food industry production showed that there was a slowing down in some branches of production (data for the period of 2000-2004). The greatest decrease in production volume occurred in canned fish production (decrease of 73% versus the physical volume of production in 2000), cheese, including brynza (43%), dried, non-fat milk (51%), canned fruit (56%), fruit juices (45%), vegetable juices (95%), dried fruit (54%), cereals (74%), rice (75%), macaroni (pasta) (40%), ethyl alcohol (58%), cognac (58%), champagne (50%), nonalcoholic drinks (74%) and soda waters (54%). These decreases can also be explained by the fact that some of the abovementioned commodities are produced by individual entrepreneurs, who do not submit production data to the statistics body. Hence, the official data can exclude the data on production growth of some individual producers.

However, there were steady growth trends in certain branches of production of the food industry. For example, sugar production in 2004 increased 19 times as compared to the physical volume of production in 2000. There was also a increase in the physical volume of production of meat and meat products (139% over the year 2000), dried vegetables (198%), chocolate and chocolate products (164%), mayonnaise (257%), beer (159%), mineral water (140%), natural tea (6.4 times) and packed fruit juices (Tetrapak) (168%). The production growth of these commodities was provided by the growth of external demand for these products (juices, dried vegetables, mineral water), as well as by the high level of protection against imported commodities in the form of customs duties and excise taxes (meat and meat products, mayonnaise, beer, mineral water).
Analysis of the dynamics of the import and export of food products showed that during the period of 2000-2004, the import volume of food products surpassed the export volume. At the same time, the worst negative trade balance was registered in 2002, when it reached USD 174 million. Furthermore, the volume of the foreign trade balance has tendency to decrease. In 2004 the total export volume of food products amounted to USD 193 million, and the total import volume was set at the level of USD 260 million.

Sectoral analysis

Uzbekistan's accession to the World Trade Organization will be accompanied by a decrease of tariff barriers and a gradual elimination of non-tariff barriers, which is the condition of the provision of access to local markets for foreign producers. Real profits for producers in Uzbekistan will depend on the price and quality competition of their products.

Analysis of Price Competitiveness: As is well known, the price factor of export goods is one of the most important conditions for the conquest of international markets. Together with quality, it determines the success on the international market, as well as the further conquest of new markets and customers. For the sake of research on the price competitiveness of the agrarian and food products of Uzbekistan, we compared the prices of several local products to the prices set by the international markets. For this analysis the U.N. database on food and agriculture was used (FAO). An analysis of the competitive advantages of the agrarian produce and food products of Uzbekistan showed the following (table 4):

Group I. Commodities with High Competitive Advantages. The produce category "fruit and vegetables" from Uzbekistan stands out for its high competitiveness, which is confirmed by the low internal-external price ratio, formed on the international market. For example, the export price of one ton of raisins from Uzbekistan is only 410, and this is the lowest price indicator among the top twenty raisin exporters in the world. The export prices of one ton of raisins from other countries were set at the following level: Iran – USD 618, Turkey – USD 918, Holland – USD 1205, USA – USD1414 and France – USD 2000.

Our price analysis also states that grapes and apricots have the same competitive advantages, with calculated ratios of 0.60 and 0.51 respectively. Thus, one ton of apricots are exported from Uzbekistan at the price of USD 701, while the export prices for apricots in other countries are the following: Kazakhstan – USD 401, Tajikistan – USD 532, Holland – USD 1179, Austria – USD 1871 and UK – USD 3885. Grapes are also exported from Uzbekistan at a more competitive price – USD 631 per ton, while the export prices for grapes from other countries are the following: Turkey – USD 517, Tajikistan – USD 529, Greece – USD 1365, Germany – USD 1735 and UK – USD 2126.

Table4. Comparative Analysis of the Agricultural Production of Uzbekistan

№	Commodity Position	Internal –External Price Ratio		Position of Uzbekistan among 20 Top Global Exporters*
		Foreign Countries	CIS Countries	
	Commodity group I			
1	Raisins	0.41	0.99	1
2	Fresh vegetables	0.41	-	2
3	Tobacco leaf	0.17	1.06	2
4	Nonalcoholic drinks	0.50	1.12	3
5	Milk (full cream)	0.52	1.18	3
6	Grapes	0.60	1.19	3
7	Cottonseed oil	0.83	1.09	4
8	Apricots	0.51	1.50	4
	Commodity group II			
9	Fruit juices	0.88	0.90	5
10	Alcoholic drinks	0.48	0.90	5
11	Ice cream	0.67	1.69	5
12	Beer	0.63	1.67	6
13	Flour (wheat)	0.88	1.37	6
	Commodity group III			
14	Chocolate goods	0.92	1.80	9
15	Beef	0.93	2.01	10
16	Rice	2.29	-	16
17	Poultry	1.80	1.43	17

*This indicator represents the ordinal place of Uzbekistan among twenty top producers-exporters, ranked in accordance with their price indicators. (It does not mean that Uzbekistan is one of the twenty top exporters of the specified produce). The closer the ordinal number to 1, the lower the price of the commodity produced in Uzbekistan compared to the other twenty producers and the more favorable the competitive advantages of the country on the international food market.

Among twenty top global exporters the cost of fresh vegetables from Uzbekistan is one of the lowest (USD 310 per ton), being above only Malaysia (USD 201 per ton). The export cost of fresh vegetables from Thailand is USD 1203 per ton, Bangladesh. – USD 1523, UK – USD 763 and Germany – USD 1223.

The countries of Central Asia have significant competitive advantages in raw tobacco production. For example, the export cost of 1 ton of tobacco from Tajikistan is USD 468, and Kyrgyzstan – USD 873. The cost of 1 ton of tobacco leaves exported from Uzbekistan is USD 711, while the export price of this product from the USA is USD 6631, Greece – USD 3834 and Germany – USD 3657. In accordance with the price factor, Uzbekistan comes in second place after Tajikistan among twenty top global exporters.

According to the purchasing prices of the main local producers of dairy products, the price for milk in Uzbekistan is USD 220 per ton. Among CIS countries, Belarus and Kyrgyzstan have the lowest cost for milk, which they export at the price of USD 177 and USD 196 per ton respectively. The cost of 1 ton of whole milk in EC countries is as follows: Holland – USD 389, Austria – USD 415, Germany – USD 421 and Denmark – USD 567. The highest export costs for 1 ton of milk are in China and Thailand: USD 673 and USD 830 per ton respectively.

Uzbekistan is one of the most competitive producers of cottonseed oil; the export cost of 1 ton of this oil is USD 500. Among the other CIS countries, Azerbaijan and Kazakhstan are the most competitive oil producers; they export cottonseed oil at the price of USD 391 and USD 531 per ton respectively. Singapore and South Korea export cottonseed oil at the price of USD 917 and USD 1176 respectively, which are the highest indicators among twenty top global exporters of the given product.

The analysis of the market of nonalcoholic drinks includes local soft drinks of different producers as well as producers of mineral water. Thus, as of 1 September 2005, 1 ton of soft drinks in Uzbekistan cost USD 325

(*author's calculations*). Other CIS countries had the following prices for 1 ton of soft drinks: Kyrgyzstan – USD 252, Kazakhstan – USD 254, Russia – USD 361. The highest price for 1 ton of soft drinks was in the UK at USD 717.

Based on the preliminary results of the analysis and in order to obtain access to the markets of the developed and developing countries, it is advisable, during negotiations on accession to the WTO, to accept a decrease in import duties and an adjustment of excise taxes in accordance with the rates of local producers for the following groups of commodities: ready dairy products (yogurt, kefir, cheese, curds), apples, pears, quince, vegetables, some edible roots, edible fruit and nuts, melon rinds, as well as products of processed vegetables, fruits, nuts and other parts of plants; water, including natural or artificial, mineral, carbonated, with or without additives, cottonseed oil and its derivatives.

Group II. Commodities with Specific Competitive Advantages. The group of commodities with specific competitive advantages consists of: fruit juices, alcoholic drinks, ice cream, beer and wheat flour.

The geographic position of the Republic of Uzbekistan, as well as its natural climate, imparts a particular flavor to all fruit and fruit products. Thus, Uzbekistan ranks in 5th place among the twenty top global exporters of fruit juices, ranked by price indicator. The price of one ton of fruit juice on the internal market is USD 800. Tajikistan produces the cheapest fruit juice, which is exported at the price of USD 207 per ton. The highest export cost for fruit juice is in European countries: particularly in Denmark, Holland and Austria, where the export costs of one ton of fruit juice are USD 2188, USD 2315 and USD 2930 respectively.

Having studied the list and prices of alcohol drinks sold wholesale in Uzbekistan, we calculated the wholesale cost of one ton of local alcoholic production, which is USD 325. At the same time, the export cost of alcoholic beverages in Kyrgyzstan and Kazakhstan are USD 252 and USD 254 per ton respectively, rendering them the cheapest producers of this product. The export cost of alcoholic production of Russia is USD 361 per ton. The most expensive producers of alcoholic beverages are the UK, Slovenia, Ireland and Thailand; these countries export this produce at the price of USD 717, USD 667, USD 665 and USD 664 per ton respectively.

Ice cream of local production is also competitive by price indicator with that produced in developed countries. Thus, one ton of locally made ice-cream is sold on the internal market at the price of USD 1600 (*author's calculations*). Poland, Ireland and Hungary export their ice cream at the price of USD 1772, USD 1955 and USD 2032 per ton respectively. Producers from Kyrgyzstan and Russia export their ice cream at the price of USD 868 and USD 1020 per ton respectively.

Analysis of the prices for beer in other countries revealed a relatively high cost for beer on the internal market of Uzbekistan, at USD 520 per ton. The cost of one ton of beer produced in CIS countries and then exported to other countries in Russia is USD 283, Ukraine – USD 304, Kazakhstan – USD 340. Other effective exporters are the Czech Republic (export cost of one ton of beer is USD 449), China (USD 503), and Germany (USD 777).

When considering accession to the WTO it is advisable to decrease import duties and excise taxes for the abovementioned products within 2-3 years to enable local producers to adapt themselves to the higher level of competition. In the short-term period, a certain decline of local production of these products, as well as an increase in unemployment, is expected. However, in the medium-term period, the increase in the intensity of competition will provide positive results (decrease in price and increase in quality).

Group III. Uncompetitive Commodities. The cost of beef in Uzbekistan is USD 2800 per ton. According to this indicator Uzbekistan ranks in 10th place among the top global exporters of beef, ranked by price indicator. Ukraine and Belarus export their beef at the price of USD 1360 and USD 1429 per ton respectively. The highest export cost for beef is in the EC countries Belgium and Holland, where the price for one ton of meat is USD 3853 and USD 4382 respectively. The government of Uzbekistan is taking appropriate steps for the development of livestock breeding in Uzbekistan, which should help in the future to decrease the price of meat in the country.

Poultry produced in Uzbekistan is uncompetitive by price indicator. One ton of local poultry meat is sold in Uzbekistan at the price of USD 1900 (*author's calculations*). With regards to the price factor, Uzbekistan ranks in 17th place among the top twenty global exporters of poultry. The USA and Argentina produce the cheapest poultry, which they export at the price of USD 620 and USD 803 per ton respectively. Among CIS countries, the most effective producer of poultry is Belarus, which exports poultry at the price of USD 1327 per ton.

The price for rice grown in Uzbekistan is not competitive by price factor with world prices. The wholesale price of one ton of rice on the internal market of Uzbekistan is USD 700. The most effective producers of rice are such countries as Guyana (with an export price for one ton of rice of USD 221), USA (USD 242), Surinam (USD 250) and China (USD 256).

Chocolate and chocolate goods of local production are also not competitive by price factor. One ton of local chocolate goods cost USD 3000 on the internal market. The export cost of one ton of chocolate from the Ukraine is USD 1000.

The third group of commodities is the most vulnerable to trade liberalization and the elimination of customs duties and other non-tariff barriers. Therefore, the elimination of trade barriers for import products of this group is to be phased in over a longer period (4-5 years). This requires a more thorough approach to this group of commodities during the negotiations on accession to the WTO.

Quantitative assessments of the consequences of Uzbekistan's accession to the World Trade Organization for the food processing industry

In this section the researchers of the scientific study attempted to make quantitative assessments of the effect of Uzbekistan's accession to the World Trade Organization on the food industry and processing of agricultural products. Quantitative assessments refer to possible changes in the dynamics of the revenue portion of the state budget and non-budgetary funds caused by the increase/decrease of local production and by changes in the dynamics of imports and exports of foodstuffs and agricultural products.

Given that it is impossible to extrapolate the share of tax payments of economic entities in the foodstuffs and agricultural processing industries in the structure of state revenues in the state budget, we used another method of calculating tax payments. For this purpose we used a statistical database on natural indicators of foodstuffs production in Uzbekistan for the period of 2000-2004, which was provided by the State Statistics Committee of the Republic of Uzbekistan. We also used official statistics in USD for exports and imports of foodstuffs for the period of 2000-2004. Since production volumes and monetary volumes of exports and imports did not have constant dynamics, we used average values (the calculated median of the indicators). Using the national indicators of production volumes, we gathered data on prices for foodstuffs in the domestic market. Here, we used price lists and factory prices of major producers of foodstuffs (for example, "Sharobmarkazsavdo", JSC "Uzspirit", Tashkent oil and fat company, and others) as well as medium producers ("Tegen", JV "Greenworld", and others). With official data in hand on production volumes of foodstuffs and average prices, we built a table with calculated profit from sales of products. Using the share of small enterprises in the production of foodstuffs *(36.4%, Uzbekistan Economy, 2005),* we calculated VAT and the single tax, which is paid from the indicated profit on sales as well as payments to the road fund. We also calculated revenues on excise taxes in accordance with excise tax rates, approved in accordance with the Law of the Republic of Uzbekistan "On Changes in the Tax Code of the Republic of Uzbekistan" from December 1, 2005. Another category of tax payments – corporate income tax – was calculated taking into account the average profitability of companies in the food industry *(22%, according to data of Industry in the Republic of Uzbekistan in 2003, State Statistics Committee of Uzbekistan)* and the share of small enterprises in the total structure of production of foodstuffs (36.4%).

Using the database on imports of foodstuffs, we also calculated revenues to the state budget through such means as excise taxes, customs duties, and VAT. Here, since the dynamics of export and import volumes was prone to fluctuations, we converted price indicators into average values (arithmetic average, since fluctuations were not large). Calculations on customs duties were conducted taking into account current rates of customs duties. All of those calculations allowed the approximate volume of revenues into the state budget to be identified. Having built such a database, we were able to create models of various scenarios of domestic production and trade suppliers (imports and exports) of imports.

Simultaneously, we divided goods into three groups (domestic production, exports, and imports) according to vulnerability to an increase in imports (decrease in vulnerable goods) and to provision of access to international markets (widening exports of competitive goods). In calculations we used three scenarios of possible developments:

The results of the modeling showed the following: in the optimistic scenario, which is based on achieving more favorable conditions as a result of the negotiations process in acceding to the WTO, one may expect an increase of revenues into the state budget by 132 bln. soums. Mainly, an increase in tax payments will be related to the expansion of domestic production and exports as a result of gained access to foreign markets, as well as expanded imports into the domestic market. In the inertial scenario, which is based on more standard terms of accession (short transition period for reducing trade barriers), revenues in the state budget may also increase by 72 bln. soums. Such an increase will be related to expanded domestic production, an

expanded taxable base and the inflow of tax payments as a result of increased imports. In the pessimistic scenario, which is based on less favorable terms of accession to the WTO (rapid reduction of trade barriers, no transition period for domestic producers, impossibility for domestic enterprises to rapidly adapt to terms of tough competition from imports, rapid expansion of imports) one may expect a decrease in the inflow of revenues into the state budget. In such a scenario, revenues of the state budget from the food industry may decrease by 83,6 bln. soums. All of these calculations indicate that a possible decrease in the volume of production and the results of the impact on revenues of the state budget are insignificant, taking into account the assumptions in the table above.

Table 5. Modeling the dynamics of production and trade flows of foodstuffs in the Republic of Uzbekistan, (%)

		Optimistic scenario	Inertial scenario	Pessimistic scenario
1	Domestic production			
2	Competitive goods	+20%	+10%	-20%
3	Goods with certain competitive advantage	+10%	+5%	-10%
4	Non-competitive goods	+0%	-10%	-20%
5	Imports			
6	Competitive goods	0%	+5%	+8%
7	Goods with certain competitive advantage	+5%	+10%	+15%
	Non-competitive goods	+10%	+15%	+25%

Conclusions and recommendations

1. The given study has revealed that the export structure of agricultural and food production has been shaped in accordance with the competitive advantages based on the favorable geographic position and climatic conditions of Uzbekistan. At the same time, the major exports of food products from Uzbekistan consist of labor-intensive produce such as onions, grapes, tomato paste, some fruit and vegetables, wheat, flour and raw tobacco. Uzbekistan mainly imports capital-intensive products with high added value, such as processed meat products, including sausages, fish products, dairy products including butter, flour and vegetable oil (not cottonseed oil) and margarine. For the purpose of further increasing the competitiveness of this industry it is necessary to transfer to the production and export of products with high added value by: (i) the application of high technology and the improvement of the quality control system; (ii) the development and design of products which take into account the preferences of customers on the world market.
2. The given study has revealed three groups of products classified by their vulnerability to trade liberalization. It is recommended that the following schedule for the decrease of customs duties and excise taxes during the period of accession to WTO be adopted, to be accompanied by a decrease in tariff barriers:

Table 6 Schedule for Reduction of Customs Duties

Denomination of Commodity	1st year	2nd year	3rd year	4th year	5th year	General Decrease
1st group commodities	100%*					100%
2nd group commodities	30%	30%	40%			100%
3rd group commodities	10%	15%	25%	25%	25%	100%

*% of the fixed rate.

3. The inefficient system of gathering agricultural products from households and farms leads to a certain loss of such produce. This requires that agricultural enterprises and households be encouraged to improve the process of collection. It is worth extending to other types of products the right of processing industries to pay private households in cash for whole milk.
4. *The absence of any direct connections between scientific-research institutions, farms and representatives of the food industry leads to the lack of transfer of new technologies, to purely scientific research of an academic nature (not applied and not commercial), to the lack of participation of the representatives of the real sector of the economy in this research and to the waste of resources.* This requires the creation of certain mechanisms for the quick transfer of new technologies to the regions via an extensive network of research institutions with a central scientific-research institute at the national level and subsidiaries with test centers and laboratories all over the country.
5. The application of state-of-the-art capabilities of biotechnology in Uzbekistan has great potential and should be encouraged among enterprises.
6. Foreign trade liberalization in the area of foodstuffs will not bring about large reduction of tax revenues under optimistic scenario.
7. In the long term, the most effective measures of economic policy which can improve the food security of the country and provide food sufficiency in the country must be investments in agricultural production in general and in new scientific developments in particular.