



The Modeling Uzbekistan's Membership in the WTO Through Its Impact on the Agricultural Sector

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Abstract

This article analyzes how the WTO membership of the Republic of Uzbekistan affects its agriculture. This analysis has been carried out in the form of a model, and TRIST (the tariff reform impact simulation tool) developed by the World Bank has been used in the study.

Keywords: *Republic of Uzbekistan, WTO; Agriculture; World Bank; TRIST*

Introduction

The economy of Uzbekistan is developing rapidly, and this requires the processes of integration into the world economy. For this reason, Uzbekistan's authorities aim to become a member of the WTO in the coming years. Our country applied for WTO membership in 1994, and negotiations are still ongoing. Uzbekistan is a developing country, so it is important for it to minimize the negative impact of WTO membership on agriculture. For this purpose, the impact of Uzbekistan's WTO membership on the agricultural sector has been modeled using the TRIST model.

Analysis of Literature on the Topic

Within this topic, many foreign and local scientists conducted scientific research and expressed their opinions. Among foreign scientists, Brenton P., Saborowski C., Staritz C. and von Uexkull E. (2009) "Assessing the Adjustment Implications of Trade Policy Changes Using TRIST (Tariff Reform Impact Simulation Tool)", Castro L., Kraus C. and Rocha M. (2004) "Regional Trade Integration in East Africa: Trade and Revenue Impacts of the Planned East African Community Customs Union", Hamilton A. (2009) "Discussing Existing TRIST Tools for Twelve Developing Countries: Bolivia, Burundi, Ethiopia, Jordan, Kenya, Madagascar, Malawi, Mozambique, Nigeria, Seychelles, Tanzania and Zambia", Venables A.J. (2003) "Winners and Losers from Regional Integration Agreements" have expressed their views on a similar problem in their scientific works. Among the local scientists, Mingishov Laziz, Sirojiddinov Nishonboy, Karimova Gavhar (2019) modeled the impact of the reduction of customs duties in Uzbekistan for all sectors of the economy using the TRIST model.

Research Methodology

TRIST (Tariff Reform Impact Simulation Tool) has been used to model the impact of WTO membership on agriculture. TRIST is a partial equilibrium model created by the World Bank used to evaluate foreign trade reforms. TRIST is the most appropriate model for evaluating foreign trade reforms, and in this model, conclusions are made based on collected customs tariffs, not the customs tariffs established by law. In addition, this model is open to a wide range of users and is very easy to use. TRIST also forecasts the impact of the tariff reform on VAT and excise tax. In addition, the model provides an opportunity to apply tariff liberalization scenarios separately for a certain group of products and countries.

Analysis and Results

In the process of applying this model, the information obtained from the State Customs Committee of the Republic of Uzbekistan has been used. The information has been received from the Customs Committee on the volume of import of basic agricultural products (thousand dollars), import duty, import VAT, import excise duties, and exemption from import duty and VAT. Below we present the main statistical data on the model.

Table 1. Basic information on the import of agricultural products in the model

Number of tariff lines	572 tariff lines
Number of partner countries	70 countries
Total import volume	More than 1 billion 573 million dollars

The table above shows the main data on the import of agricultural products in the model. That is, information on 572 tariff lines have been used in the model. These 572 tariff lines include various live animals, meat and meat products, fish and crustaceans, molluscs and other aquatic invertebrates, dairy products, poultry and bird eggs, natural honey and not elsewhere specified or foodstuffs of animal origin, live trees and other plants, trees and plant roots and other similar parts thereof, cut flowers and ornamental leaves, vegetables and certain tubers, fresh fruits and nuts, citrus fruits, tea and coffee, various spices, cereals, ground flour; malt, starch, inulin. These products were imported to our country from about 70 countries of the world. These countries are Afghanistan, Algeria, Argentina, Armenia, Austria, Azerbaijan, Belgium, Belarus, Brazil, Bulgaria, Canada, China, Colombia, Costa Rica, Cyprus, Czech Republic, Denmark, Ecuador, Egypt, Spain, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, Indonesia, India, Ireland, Iran, Israel, Italy, Japan, Kazakhstan, Kenya, Kyrgyzstan, South Korea, Saudi Arabia, Latvia, Lebanon, Lithuania, Malaysia, Moldova, Greece, Netherlands, Norway, New Zealand, Pakistan, Philippines, Palestine, Poland, Romania, Republic of South Africa, Russia, Singapore, Serbia, Sri Lanka, Slovakia, Thailand, Tajikistan, Turkmenistan, Taiwan, Tunisia, Turkey, United Arab Emirates, the United Kingdom, USA and Vietnam. These countries, in turn, are divided into 3 groups: WTO member countries, non-WTO member countries, and CIS countries. The list of WTO member countries consists of 56 countries, the list of non-WTO countries consists of 6 countries, and the list of CIS countries consists of 8 countries. The total share of the main agricultural products imported from 70 countries under these 572 tariff lines in 2022 amounted to more than 1 billion 573 million dollars. The following table lists the main import partners.

Table 2. Basic information on the import of agricultural products in the model

Top 10 import partner countries	Import volume (in thousands of dollars)	Volume in total imports (in %)
Kazakhstan	812526	51,6
Belarus	132443	8,4
Russia	118326	7,5
Kyrgyzstan	82532	5,2
Ecuador	62411	4,0
Pakistan	57540	3,7
Turkey	47249	3,0
China	41925	2,7
Iran	24704	1,6
Poland	20022	1,3

Source: Based on the information of the State Customs Committee of the Republic of Uzbekistan.

The above table shows the countries from which the main agricultural products imported our country in 2022. According to the table, products worth 812 million 526 thousand dollars were imported to our country from Kazakhstan last year, which is equal to 51.6% of the total import of the main agricultural products. That year, Belarus made exports to our country worth 132 million 443 thousand dollars, while this figure for Russia was 118 million 326 thousand dollars. And the share of these two countries in imports was 8.4 and 7.5%, respectively. The share of other countries' in imports varies from 82 million dollars to 20 million dollars. In the table below, information about duties and taxes on imported products is given.

Table 3. Basic information on duties and taxes on import of agricultural products in the model (in thousands of dollars)

	Statutory tariff	Collected tariff	Excise tax	VAT
Total cost	234414	8676	0	163631
Share of the total value		5,0 %	0 %	95 %
Simple average	26,3 %	8,8 %		
Weighted average	14,9 %	0,6 %		

Source: Based on the information of the State Customs Committee of the Republic of Uzbekistan.

The above table provides information on the volume of statutory and collected tariffs, the average rate of simple and weighted tariffs, excise tax, and VAT. According to the statutory tariff, 234 million 414 thousand dollars of customs tariffs, excise duty and VAT should have been collected. In practice, tariffs of 8 million 676 thousand dollars and VAT of 163 million 631 thousand dollars were collected. The main reason for this is the tariff and VAT exemptions. Because many products are given benefits from both. According to the model, the simple average tariff for the statutory tariff of the main agricultural products is 26.3% and the weighted average is 14.9%, and the simple average tariff for the collected tariff is 8.8% and weighted average is 0.6. In general, in 2022, the state budget received 172 million 307 thousand dollars from import duties on basic agricultural products, of which 5% was contributed by import tariffs and 95% by VAT.

In the model, the same scenario has been used for WTO member countries, non-WTO countries and CIS countries. That is, the essence of the scenario proposed in the model is unchanged the current customs tariffs if tariffs are lower than the Eurasian Economic Union customs tariffs, and if it is the opposite, they are reduced to the Eurasian Economic Union customs tariffs' degree. In 2022, agricultural

products in the model were not subject to excise tax and VAT was equal to 15%. Therefore, the excise tax was 0 and the VAT was 12%. The reason for the 12% VAT rate is that starting from January 1, 2023, the amount of value added tax in our country was reduced from 15% to 12%. Below are the main results from the model.

Table 4. The main results obtained based on the application of the TRIST model

The impact of changes in customs tariffs on the volume of imports	
Import volume before tariff changes	1 billion 573 million 354 thousand dollars
Import volume after tariff changes	1 billion 555 million 797 thousand dollars
The impact of changes in customs tariffs on the volume of imports	
Changes in the volume of imports	The volume of imports will decrease by 17 million 557 thousand dollars
Changes in the volume of imports	The volume of imports will decrease by 1.1%
The impact of changes in duty rates on income	
The amount of revenue received from duties before the change of duty rates	8 million 676 thousand dollars
The amount of revenue received from duties after the change of duty rates	10 million 466 thousand dollars
Impact of changes in duty rates on revenue	
Change in the amount of income from duties	The income will increase by 1 million 791 thousand dollars
Change in the amount of income from duties	The income will increase by 20,6 %
Total tax revenue from imports	
Total tax revenue before tariff changes	172 million 306 thousand dollars
Total tax revenue after tariff changes	198 million 418 thousand dollars
Changes in total tax revenues from imports	
Changes in tax revenues	Total tax revenues will increase by 26 million 112 million dollars
Changes in tax revenues	Total tax revenues will increase by 15,2 %
Collected tariff rate	
The average collected tariff rate before	0,6 %
The average collected tariff rate after	0,7 %

Source: prepared by the author based on the results of the TRIST model.

In the table above, the main results obtained based on the application of the TRIST model are presented in the form of a table. In 2022, the import volume of basic agricultural products amounted to 1 billion 573 million 354 thousand dollars, and as a result of the change in customs tariffs and the reduction of VAT from 15% to 12%, the import volume will be 1 billion 555 million 797 thousand dollars. That is, as a result of the application of the scenario proposed by us, the import of basic agricultural products will decrease by 17 million 557 thousand dollars or 1.1%. As a result of the application of this scenario, if the import of basic agricultural products decreases by more than 17 million dollars or by 1.1%, the income from customs tariffs will change from 8 million 676 thousand dollars to 10 million 466 thousand dollars. That is, the income from customs tariffs will increase by 1 million 791 thousand dollars or 20.6%. In addition, as a result of the scenario we propose, the total tax revenues from imports will increase from 172 million 306 thousand dollars by 198 million 418 thousand dollars. That is, total tax revenues from imports will increase by 26 million 112 thousand dollars or 15.2%. These results show that the proposed scenario will help protect our country's interests in the field of agriculture to the maximum extent in the process of becoming a member of the World Trade Organization. As a result of the application of this scenario, the average tariff rate will change from 0,6 by 0.7%.

The table below shows the volume of imports, statutory and collected customs tariffs, and the volume of VAT before and after the change of customs tariffs in the section of WTO members and non-members of this organization and the CIS countries.

Table 5. The main results obtained based on the application of the TRIST model in the case of WTO member, non-WTO members and CIS countries

The impact of changes in customs tariffs on the volume of imports		
Import volume before tariff changes		
Non-WTO member countries 26 million 676 thousand dollars	CIS countries 1 billion 152 million 971 thousand dollars	WTO member countries 393 million 708 thousand dollars
Import volume after tariff changes		
Non-WTO member countries 28 million 429 thousand dollars	CIS countries 1 billion 133 million 425 thousand dollars	WTO member countries 393 million 943 thousand dollars
The impact of changes in duty rates on the volume of the statutory tariff		
The volume of statutory tariff before the change of duty tariffs		
Non-WTO member countries 15 million 422 thousand dollars	CIS countries 89 million 604 thousand dollars	WTO member countries 129 million 388 thousand dollars
The volume of statutory tariff after the change of duty tariffs		
Non-WTO member countries 16 million 809 thousand dollars	CIS countries 86 million 185 thousand dollars	WTO member countries 133 million thousand dollars
The impact of changes in duty rates on the volume of the collected tariff		
The volume of collected tariff before the change of duty tariffs		
Non-WTO member countries 1 million 253 thousand dollars	CIS countries 756 thousand dollars	WTO member countries 6 million 666 thousand dollars
The volume of collected tariff after the change of duty tariffs		
Non-WTO member countries 500 thousand dollars	CIS countries 6 million 750 thousand dollars	WTO member countries 3 million 216 thousand dollars
Impact of VAT rate change on VAT volume		
Amount of VAT before VAT rate changes		
Non-WTO member countries 5 million 902 thousand dollars	CIS countries 110 million 294 thousand dollars	WTO member countries 47 million 434 thousand dollars
Amount of VAT after VAT rate changes		
Non-WTO member countries 3 million 471 thousand dollars	CIS countries 136 million 821 thousand dollars	WTO member countries 47 million 659 thousand dollars
Impact of tariff changes on total fiscal revenue from imports		
The volume of total fiscal revenue before the change in duty rates		
Non-WTO member countries 7 million 155 thousand dollars	CIS countries 111 million 50 thousand dollars	WTO member countries 54 million 100 thousand dollars
The volume of total fiscal revenue after the change in duty rates		
Non-WTO member countries 3 million 972 thousand dollars	CIS countries 143 million 571 thousand dollars	WTO member countries 50 million 876 thousand dollars

Source: prepared by the author based on the results of the TRIST model.

Table 5 shows how the application of the foreign trade policy based on the tariff policy of the Eurasian Economic Union in the process of joining the World Trade Organization affects the volume of revenue from customs tariffs and other fees in country groups. Before the change in tariffs, the import of basic agricultural products from non-WTO countries was 26 million 676 thousand dollars, WTO member countries was 39 million 708 thousand dollars and CIS countries was 1 billion 152 million 971 thousand dollars. If the tariff rates in the TRIST model change according to the scenario proposed in the model, the volume of imports will increase from non-WTO countries by 28 million 429 thousand dollars, from WTO member countries by 393 million 943 thousand dollars and from CIS countries by 1 billion 133 million 425 thousand dollars. In this case, we can see that the import volume of the main agricultural products will increase for non-WTO and WTO member countries after the change in customs tariffs, on the contrary, it will decrease for the CIS countries. Accordingly, the volume of customs tariffs and other levies on imported products imported from non-WTO and WTO member countries will increase, as well as customs tariffs on basic agricultural products imported from CIS countries and the amount of other fees will decrease. This situation was significantly influenced by the reduction of VAT from 15% in 2022 to 12% in 2023. In the table below, we can see how the application of the proposed scenario affects the volume of imports and the volume of import fees in the case of 15% VAT.

Table 6. The main results obtained based on the application of the TRIST model

The impact of changes in customs tariffs on the volume of imports	
Import volume before tariff changes	1 billion 573 million 354 thousand dollars
Import volume after tariff changes	1 billion 571 million 996 thousand dollars
The impact of changes in customs tariffs on the volume of imports	
Changes in the volume of imports	The volume of imports will decrease by 1 million 359 thousand dollars
Changes in the volume of imports	The volume of imports will decrease by 0.1%
The impact of changes in duty rates on income	
The amount of revenue received from duties before the change of duty rates	8 million 676 thousand dollars
The amount of revenue received from duties after the change of duty rates	10 million 302 thousand dollars
Impact of changes in duty rates on revenue from duties	
Change in the amount of income	The income will increase by 1 million 626 thousand dollars
Change in the amount of income	The income will increase by 18,7 %
Total tax revenue from imports	
Total tax revenue before tariff changes	172 million 306 thousand dollars
Total tax revenue after tariff changes	173 million 847 thousand dollars
Changes in total tax revenues from imports	
Changes in tax revenues	Total tax revenues will increase by 1 million 541 thousand dollars
Changes in tax revenues	Total tax revenues will increase by 0,9 %
Collected tariff rate	
The average collected tariff rate before	0,6 %
The average collected tariff rate after	0,7 %

Source: prepared by the author based on the results of the TRIST model.

In Table 6, the main results obtained based on the application of the TRIST model are presented in the form of a table. In this case, in 2022, the import volume of the main agricultural products amounted to 1 billion 573 million 354 thousand dollars, and as a result of changing the customs tariffs and leaving

the VAT unchanged at 15%, the import volume will be 1 billion 571 million 996 thousand dollars. That is, if the VAT remains unchanged at 15% instead of 12%, the model predicts that the volume of our imports will decrease less. In connection with this, volume of import duties are expected to increase less. Analyzing the results calculated by the above two models, we can witness an interesting situation. That is, in both cases, if the import duties are reduced, we can witness an decrease in the volume of imports. According to economic laws, if import duties are reduced, the volume of imports should increase. The main reason for this situation is the import privileges. Assuming no import preference at all, the proposed scenario was applied and the following results have been obtained.

Table 7. The main results obtained based on the application of the TRIST model

The impact of changes in customs tariffs on the volume of imports	
Import volume before tariff changes	1 billion 573 million 354 thousand dollars
Import volume after tariff changes	1 billion 631 million 625 thousand dollars
The impact of changes in customs tariffs on the volume of imports	
Changes in the volume of imports	Import volume will increase by 58 million 271 thousand dollars
Changes in the volume of imports	Import volume will increase by 3,7 %
The impact of changes in duty rates on income	
The amount of revenue received from duties before the change of duty rates	138 million 954 thousand dollars
The amount of revenue received from duties after the change of duty rates	4 million 866 thousand dollars
Impact of changes in duty rates on revenue from duties	
Change in the amount of income	Income will decrease by 134 million 88 thousand dollars
Change in the amount of income	Income will decrease by 96,5 %
Total tax revenue from imports	
Total tax revenue before tariff changes	374 million 946 thousand dollars
Total tax revenue after tariff changes	201 million 245 thousand dollars
Changes in total tax revenues from imports	
Changes in tax revenues	Total tax revenue will decrease by 173 million 701 thousand dollars
Changes in tax revenues	Total tax revenue will decrease by 46,3 %
Collected tariff rate	
Average collected tariff rate before	8,8 %
Average collected tariff rate after	0,3 %

Source: prepared by the author based on the results of the TRIST model.

Conclusion

In conclusion, we can say that in the process of becoming a member of the World Trade Organization, customs tariffs will be adjusted according to the scenario proposed in the model, that is, if the current customs tariffs are lower than the customs tariffs of the Eurasian Economic Union, it is left unchanged, if it is the opposite, that is, if the current customs tariffs are higher than the customs tariffs used by the Eurasian Economic Union, these customs tariffs are brought to the same level as the customs tariffs of this union, then this scenario will be the most acceptable. According to this scenario, the import of the main agricultural products will decrease from 1 billion 573 million 354 thousand dollars in 2022 by 1 billion 555 million 797 thousand dollars or 1.1. It was clarified that the import of the main agricultural products decreases, the customs tariffs and taxes on imports will increase on the contrary. In 2022, the

revenue from customs tariffs was 8 million 676 thousand dollars, and as a result of the proposed scenario, it has been estimated that the revenue from customs tariffs will reach 10 million 466 thousand dollars. In this case, the income from customs tariffs will increase by 1 million 791 thousand dollars or 20.6%. In 2022, the total tax revenue from imports amounted to 172 million 306 thousand dollars, and as a result of the proposed scenario, it has been estimated that it will reach 198 million 418 thousand dollars. That is, as a result of the proposed scenario, it has been estimated that the total tax revenues from imports will increase by 26 million 112 million dollars or by 15.2%. Analyzing the above results, we can conclude as follows. Although the import duties for the main agricultural products are set at a high rate in our country, these duties are practically not working due to the tariffs and VAT benefits. In fact, in 2022, import duties of 8 million 676 thousand dollars from the main agricultural products fell into the state budget, although this amount would be equal to 138 million 954 thousand dollars if no concessions were given at all. The amount of VAT collected in 2022 was equal to 163 million 631 thousand dollars. If the VAT exemption was not granted, this amount would be equal to 235 million 991 thousand dollars. As a result of modeling the impact of the WTO on Uzbekistan's agriculture according to the TRIST model, it is proposed to join this organization with scenario used in this model and cancel all the currently valid import preferences.

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