Economic consequences of changes in apple imports to the Kyrgyz republic

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Abstract: Import of apples to the Kyrgyz Republic has a significant impact on the provision of food demand and the state of the domestic fruit market. In the period from 2020 to 2024, there were changes in the volume and structure of supplies due to foreign economic and logistical factors. The purpose of the study is to identify the economic consequences of changes in the geography of apple imports. The official data of customs statistics on the main supplying countries: Iran, China, Uzbekistan and Poland were used as a base. The method of analysis included the assessment of the dynamics of physical and cost indicators, as well as the redistribution of countries' shares in total imports. The results showed a decrease in the volume of supplies from Iran and Uzbekistan, while imports from Poland and China increased, which affected the value of products, foreign exchange costs and the sustainability of the domestic market. It is concluded that it is important to diversify import sources and develop economically sound strategies of foreign trade regulation in order to ensure food security and support domestic horticulture.

1 Introduction

Apple tree occupies one of the leading positions among fruit crops in the Kyrgyz Republic both in terms of production volumes and the degree of satisfaction of domestic demand of the population. This crop is traditionally grown in most agrarian regions of the country, especially in Chui, Talas and Osh oblasts, due to favorable climatic conditions, fertile soils and accumulated agronomic experience [1]. Nevertheless, despite the potential of domestic production, the market of fruits, particularly apples, remains partially dependent on external supplies, especially in periods of off-season consumption, renewal of perennial plantations and shortage of certain varieties [2].

Import of apples is an important component of the agro-food balance of the country and directly affects food security, price stability and availability of fruit products for various population groups. In addition, external supplies play an important role in the formation of varietal and technological diversity in the domestic market, filling the shortage of quality

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planting material and fresh products. However, in the context of global and regional economic shocks, including the COVID-19 pandemic, sanctions policy, inflationary waves and currency fluctuations, the structure and volumes of apple imports to Kyrgyzstan have undergone significant changes [3].

Starting from 2020, there is a sharp decline in supplies from traditionally strong destinations, such as Iran and Uzbekistan, and a simultaneous increase in the share of imports from China and European Union countries, primarily Poland and Lithuania. These shifts in the geography of foreign trade are due to a number of factors: changes in logistics routes, rising transportation costs, changes in customs policy, and increased requirements for product quality and safety. As a result, there are not only quantitative changes, but also significant cost fluctuations, which puts pressure on the currency balance, domestic prices and competitiveness of domestic producers.

These trends make it particularly relevant to study the economic consequences of changes in the structure of apple imports to the Kyrgyz Republic. It is important not only to record statistical shifts, but also to identify their impact on macroeconomic indicators (such as foreign exchange costs, structure of the foreign trade balance, price volatility), as well as at the microeconomic level - on farm profitability, market sustainability of farmers and the level of food security of the population [4,5].

The purpose of this article is to provide a comprehensive economic analysis of changes in imports of apples to Kyrgyzstan in the period 2020-2024 with a focus on identifying structural shifts by supplier country, dynamics of value indicators and their impact on the agricultural market. The presented results may be useful for government agencies that formulate trade and agricultural policy, as well as for private enterprises interested in strategic planning of imports, logistics and production of fruits in the changing foreign trade context.

2 Materials and methods of research

The materials of the study are based on the official statistics of foreign economic activity of the Kyrgyz Republic for 2020-2024. The main source of information was the data of the Customs Service of the Kyrgyz Republic, grouped by HS code 080810 - "apples". The study includes quantitative and cost indicators of imports in kind (tons) and monetary terms (in soms and U.S. dollars) for each year, as well as a breakdown by supplier countries, including Iran, China, Uzbekistan, Poland, Kazakhstan, Lithuania, Russia, Armenia and others. Additionally, if necessary, reference exchange rates of the National Bank of the Kyrgyz Republic were used to bring the indicators into a comparable form, as well as normative documents regulating phytosanitary and logistical conditions of import of fruit products. All data were brought to a single format and checked for completeness, reliability and correctness [6].

A set of economic and statistical analysis methods was used to analyze the economic consequences of changes in the structure of apple imports:

- Comparative method - to identify differences in the time and country structure of imports;
- Dynamic analysis - to assess year-to-year changes in the volume and value of shipments;
- Structural analysis - to calculate the shares of individual countries in total imports;
- Graphical-analytical method - to visualize the results in the form of charts and graphs;
- Factor analysis - to assess the impact of external conditions (logistics, exchange rate, trade barriers) on fluctuations in imports;
- Economic interpretation - to identify implications for the foreign exchange balance, domestic market price situation and sustainability of the agricultural sector.

The analysis was conducted using spreadsheet processors (Microsoft Excel and Google Sheets) and based on a systematic approach that takes into account the relationship between international trade, foreign exchange flows and the domestic agri-food market.

3 Results of the study

As a result of the analysis of foreign trade statistics of the Kyrgyz Republic on imports of apples (TN VED 080810) for 2020-2024, significant changes were revealed both in the volume of supplies, and in their geographical structure and value. The total volume of imports of apples in physical terms decreased more than three times: from 18.1 thousand tons in 2020 to 5.4 thousand tons in 2024. The peak decline was observed in 2022, when only 3.1 thousand tons of apples were imported, which was the minimum value for the period under review.

Analysis of the value of imports also shows significant changes. If in 2020 the total value of imports amounted to about 464.9 million KGS or 6.46 million USD, in 2024 these figures amounted to 206.6 million KGS and 2.31 million USD, respectively. Thus, the decrease in the value of imports amounted to 55.5% in KGS and 64.3% in USD. This indicates not only a decrease in physical volumes, but also a change in price parameters, the structure of purchased products and, possibly, the varietal composition of apples.

Significant structural shifts are also observed in the breakdown of supplying countries. Throughout the entire period, Iran and China provided the largest volumes of imports, but their share in 2024 has significantly decreased. Thus, supplies from Iran decreased from 11.9 thousand tons in 2020 to 2.05 thousand tons in 2024. China, after falling to its lowest values in 2022 (94.4 tons), increased exports to Kyrgyzstan again, reaching 1.4 thousand tons in 2024. Uzbekistan, which was one of the key suppliers in 2020-2021, almost completely dropped off the list in 2024, reducing volumes to 121 tons.

The growth of imports from Poland deserves special attention: from a complete absence of supplies in 2020, the volume increased to 1.45 thousand tons in 2024, with a value of 66.9 million KGS (749.9 thousand USD). This may indicate a reorientation of Kyrgyzstan's foreign trade ties from regional partners (Iran, Uzbekistan) to more distant but stable EU markets, which in turn affects logistics, prices and foreign exchange costs.

The share of countries with minor supplies (Russia, Armenia, Lithuania, Turkey) remained low and unstable, not exceeding 250 tons per year. Some of these countries, such as Turkey and Armenia, stopped exporting apples to Kyrgyzstan after 2021 [7].

In addition to quantitative and cost changes, of considerable interest is the dynamics of foreign exchange burden due to apple imports [8]. In 2020, the foreign exchange cost of imports amounted to 6.46 million US dollars, while in 2024 - 2.31 million dollars, indicating a decrease of 64.3%. This decrease is due to both a general decline in import volumes and a possible shift to more affordable suppliers or changes in the pricing policy of foreign exporters. At the same time, against the background of exchange rate fluctuations, the real burden on the national economy could change disproportionately, especially during the periods of KGS depreciation.

The analysis of the average cost of one ton of imported apples in dollar terms showed a tendency towards relative stability, with small fluctuations between 340-430 dollars per ton depending on the country and year [9]. At the same time, imports from EU countries (Poland, Lithuania) turned out to be significantly more expensive compared to supplies from Iran and Uzbekistan, which also affects the final price of the product in the domestic market [10].

The regional concentration of imports has also changed: if in 2020 the main volumes were in the near abroad (Iran, Uzbekistan, China), by 2024 there is a clear shift towards the far abroad (EU), primarily Poland. This requires a revision of logistics schemes, customs mechanisms and may increase the total cost of imported products. The transition to supplies from countries with higher quality standards and certification can also explain the growth of the average cost of imports with a decrease in its volume.

Table 1 shows the full distribution of import volumes of apples to the Kyrgyz Republic for the five-year period - from 2020 to 2024 - by major supplier countries. In particular, the table considers both natural indicators (net weight in tons) and value parameters (in thousands

of soms and thousands of U.S. dollars). This structure allows a comprehensive assessment of changes in both the physical volume of production and economic burden on the country in currency and national terms. The data are grouped by year and cover key trading partners, including Iran, China, Uzbekistan, Poland, Russia, Kazakhstan and other countries. Table 1 reflects both steady suppliers throughout the period and countries whose activity was sporadic (e.g. Armenia, Turkey, Lithuania, etc.). In addition, the table makes it possible to trace changes in the shares of countries in the structure of total imports, trends of growth or decline in supplies to individual destinations, as well as fluctuations in foreign exchange costs, which are especially important in conditions of foreign economic instability.

Table 1. Imports of apples to the Kyrgyz Republic by country in 2020-2024 (in tons, soms and US dollars)

Name of additional unit of measure (tons)	2020			2021			2022			2023				2024	
	quantity in kind	by value		quantity in kind	by value		quantity in kind	by value		quantity in kind	by value		quantity in kind	by value	
	net weight, tons	thousand soms	thousand dollars	net weight, tons	thousand soms	thousand dollars	net weight, tons	thousand soms	thousand dollars	net weight, tons	thousand soms	thousand dollars	net weight, tons	thousand soms	thousand dollars
Apples	18128,60	464953,70	6463,68	11842,60	411005,60	4854,93	3090,70	101171,70	1239,32	4520,40	171897,40	1965,62	5407,40	206633,80	2314,72
Afghanistan	0,0	0,0	0,000	0,0	0,0	0,000	0,0	0,0	0,000	59,9	2139,3	23,990	63,9	2281,8	25,548
Armenia	61,9	803,4	11,502	0,0	0,0	0,000	0,0	0,0	0,000	0,0	0,0	0,000	0,0	0,0	0,000
China	2127,1	39989,4	560,732	509,8	17166,0	202,513	94,4	3239,4	37,444	101,5	3612,2	40,826	1402,4	50394,0	564,948
Iran	11910,4	343446,8	4811,902	8877,3	299859,7	3541,311	201,6	6780,5	81,187	233,5	8566,3	97,794	2051,6	74727,7	836,365
Kazakhstan	1962,1	17586,6	241,649	764,8	35514,0	420,326	395,7	9732,0	116,227	655,2	14451,8	165,399	76,3	1518,4	17,045
Tajikistan	0,0	0,0	0,000	0,0	0,0	0,000	0,0	0,0	0,000	0,0	0,0	0,000	0,0	0,0	0,000

Lithuania	Moldova	Poland	Russia	Turkey	Uzbekistan
0,0	0,0	0,0	40,2	204,0	1822,9
0,0	0,0	0,0	630,6	6353,5	56143,4
0,000	0,000	0,000	7,800	90,373	739,724
0,0	20,6	0,0	0,0	216,3	1453,8
0,0	698,8	0,0	0,0	7752,1	50015,0
0,000	8,240	0,000	0,000	91,692	590,849
19,5	19,7	600,1	0,0	70,8	1688,9
775,1	668,2	24275,8	0,0	2521,5	53179,2
9,750	7,880	300,040	0,000	30,451	656,342
19,5	60,8	1745,5	2,0	12,9	1629,6
853,3	5794,8	78003,5	254,7	626,3	57595,2
9,750	66,287	892,171	2,917	7,242	659,239
0,0	0,0	1449,0	242,7	0,0	121,5
0,0	0,0	66912,1	6385,4	0,0	4414,4
0,000	0,000	749,901	71,372	0,000	49,544

Table 2 presents the share (%) of individual countries in the total volume of imports of apples to the Kyrgyz Republic for the period from 2020 to 2024. The calculations are based on the comparison of the physical volume of supplies (net weight in tons) for each country with the total volume of imports for the corresponding year. The sign "-" denotes the absence of imports from a given country in the specified period.

Table 2. Share of Countries in Total Imports of Apples, %

Country	2020	2021	2022	2023	2024
Afghanistan	-	-	-	1,33	1,18
Armenia	0,34	-	-	-	-
China	11,73	4,3	3,05	2,25	25,93
Iran	65,7	74,96	6,52	5,17	37,94
Kazakhstan	10,82	6,46	12,8	14,49	1,41
Tajikistan	-	-	-	-	-
Lithuania	-	-	0,63	0,43	-
Moldova	-	0,17	0,64	1,35	-
Poland	-	-	19,42	38,61	26,8
Russia	0,22	-	-	0,04	4,49
Turkey	1,13	1,83	2,29	0,29	-
Uzbekistan	10,06	12,28	54,64	36,05	2,25

Source: Author's interpretation based on official customs statistics of the Kyrgyz Republic

The data allow us to trace the dynamics of changes in the structure of foreign trade relations in the segment of apple supplies. In particular, there is a decrease in the share of traditional suppliers (Iran, Uzbekistan) and an increase in the importance of new directions (Poland, China). High volatility is also seen for countries with unstable supplies (Lithuania, Armenia, Turkey, etc.). The maximum share was recorded for Iran in 2021 (74.96%), and the maximum growth - for Poland in 2023 (38.61%).

Table 3. Import of Apples in Net Weight, Tons (2020-2024)

Country	2020	2021	2022	2023	2024
Afghanistan	-	-	-	59,9	63,9
Armenia	61,9	-	-	-	-
China	2127,1	509,8	94,4	101,5	1402,4
Iran	11910,4	8877,3	201,6	233,5	2051,6
Kazakhstan	1962,1	764,8	395,7	655,2	76,3
Tajikistan	-	-	-	-	-
Lithuania	-	-	19,5	19,5	-
Moldova	-	20,6	19,7	60,8	-
Poland	-	-	600,1	1745,5	1449
Russia	40,2	-	-	2	242,7
Turkey	204	216,3	70,8	12,9	-
Uzbekistan	1822,9	1453,8	1688,9	1629,6	121,5

Source: Author's processing of official customs statistics of the Kyrgyz Republic.

Table 3 presents data on physical volumes of imports of apples to the Kyrgyz Republic in physical terms - net weight (tons) - by major supplying countries for the period from 2020 to 2024. The table allows to trace the dynamics of changes in each direction of supply, identify trends, and determine the stability or volatility of trade relations with specific countries. As can be seen from the data, Iran and China provided the largest volumes throughout the period. However, their share and volumes changed over time: Iran, which was the main supplier in 2020-2021, significantly reduced volumes by 2024. At the same time, imports from Poland show steady growth from 2022 onwards, which may indicate a reorientation of Kyrgyzstan towards European markets. The presence of countries in the table is uneven: some countries, such as Armenia, Lithuania and Tajikistan, have either stopped supplying or participated sporadically. The symbol "-" means no supplies or zero volumes in the respective direction in a particular year.

The results of the study show the presence of significant structural changes in the geography of apple imports to the Kyrgyz Republic for the period 2020-2024. These changes have had a direct impact on both supply volumes and the economic burden associated with foreign exchange costs and logistics.

3.1 Decrease in import volumes and currency burden

The total volume of apple imports in physical terms decreased from 18.1 thousand tons in 2020 to 5.4 thousand tons in 2024, which is a decrease of more than 70%. This may be due to both external restrictions (sanctions, disruptions in logistics, tightening of phytosanitary requirements) and growth in domestic production, partial replacement by other fruits or changes in consumer demand. Accordingly, the foreign exchange cost of apple imports has more than halved, from $6.46 million in 2020 to $2.31 million in 2024. However, there was a reallocation of sources of supply, which affected the average value of imported produce.

3.2 Changes in the geography of supplies and price differentiation

The most significant changes were the reduction in supplies from Iran and Uzbekistan, which in 2020-2021 held leading positions (up to 75% of total imports). By 2024, the share of Iran decreased to 38%, and that of Uzbekistan - to 2.25%. This may be due to both political-

economic factors and deteriorating logistical or price conditions. At the same time, there was an increase in the share of supplies from Poland (from 0% to 26.8%) and China (to 25.9%). The shift to the European market (in particular, the Polish market) entailed an increase in the average price per ton: while Iran's average price per ton varied between $400 and $420, Poland's average price per ton was over $600 in some years. This increases the currency burden per unit of production and potentially affects the final price for the consumer.

3.3 Increased instability and decreased resilience of supply chains

Most of the countries presented in the tables do not provide stable supply volumes. For example, Turkey, Lithuania, Armenia, Moldova and Tajikistan showed episodic participation in imports, which makes it difficult to form long-term contracts and predictable logistics schemes. In such conditions, it is critical to strengthen domestic production, especially in agrarian zones with high horticultural potential.

3.4 Implications for the national market

Decrease in the volume of imports with simultaneous growth of the average cost indicates the risks of appreciation of products in the domestic market. In conditions of currency instability, this may lead to price growth and decrease in purchasing power of the population. At the same time, there is an economic feasibility of stimulating domestic apple production, especially in conditions of favorable climate and availability of agricultural infrastructure in Chui, Talas and Osh oblasts.

Table 4. Economic ratios by country for 2024

Country	Share, %	Volume, tons	Price, USD/t
Afghanistan	1,18	63,9	0,4
Armenia	-	-	-
China	25,93	1402,4	0,4
Iran	37,94	2051,6	0,41
Kazakhstan	1,41	76,3	0,22
Tajikistan	-	-	-
Lithuania	-	-	-
Moldova	-	-	-
Poland	26,8	1449	0,52
Russia	4,49	242,7	0,29
Turkey	-	-	-
Uzbekistan	2,25	121,5	0,41

Source: author's interpretation based on official customs statistics of the Kyrgyz Republic for 2020-2024.

The table 4 presents key economic indicators characterizing imports of apples to the Kyrgyz Republic by major supplying countries for 2024. The following coefficients have been calculated:

- country's share in total apple imports in %,
- actual volume of supplies in physical terms (tons),
- average price per tonne of products in US dollars (USD/t).

The data allow us to objectively compare the economic efficiency of foreign trade relations for each country: to identify the countries with the largest volume of supplies, with the highest or lowest price, as well as to understand the structure of the market. Thus, Iran (37.94%), Poland (26.8%) and China (25.93%) have the largest shares in imports. At the

same time, the average price of Poland (0.52 USD/t) is higher than that of China and Iran, which may be related to the quality characteristics of products, logistics costs and customs conditions.

Indicators for a number of countries (Armenia, Tajikistan, Lithuania, etc.) are missing, which reflects their non-participation in apple imports during the period. The symbol "-" denotes the absence of data or zero values for the corresponding parameters.

Of particular interest is the comparison between supply volume and average price per ton. For example, China, despite its large import volumes (1402.4 tons), offers products at a relatively low price (0.40 USD/t), making it one of the most competitive suppliers in 2024. At the same time, Poland, having comparable volumes (1449 tons), offers products at a higher price (0.52 USD/t), which is probably due to a different quality level of products, standardization, variety diversity and high transportation costs

On the other hand, countries with minimal supply volumes, such as Kazakhstan (76.3 tons) and Uzbekistan (121.5 tons), are characterized by lower prices - 0.22 and 0.41 USD/t, respectively. These destinations can be considered as logistically accessible, but do not play a dominant role in the formation of the foreign trade basket for apples

It is important to note that average prices for all countries remained below one dollar per ton, indicating the presence of either special delivery conditions (e.g., interstate agreements) or a simplified certification and quality control scheme typical for fruit and vegetable products within the EAEU.

Thus, based on economic coefficients, we can conclude that the structure of apple imports in 2024 is shifting towards diversification of suppliers and increasing the share of countries with a higher price per ton, which requires a revision of pricing policy, logistics solutions and the prospect of developing own horticulture as a tool to reduce foreign exchange costs.

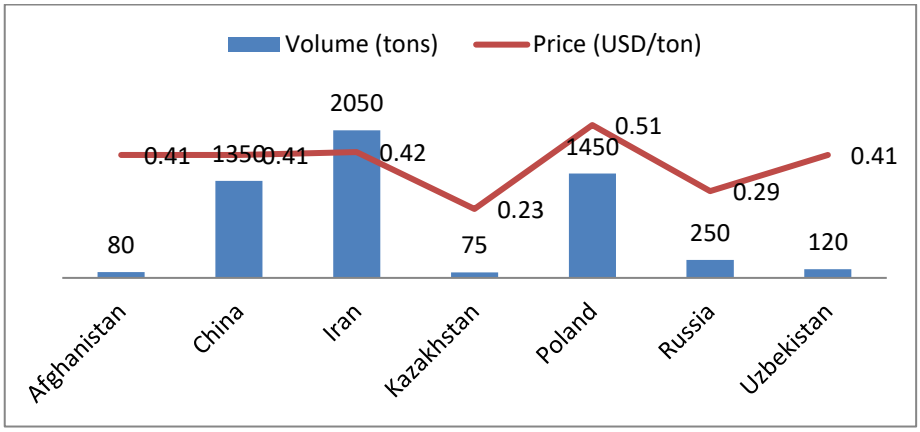

Fig. 1. Volume, price and share of apple imports by country (2024)

Figure 1. Volume, price and share of apple imports by country (2024). The analysis of foreign trade statistics of the Kyrgyz Republic for 2020-2024 has revealed complex changes in the volume, structure and economic parameters of apple imports, reflecting both internal and global transformations in the agro-food system of the country. There is a steady tendency to reduce the total volume of imports of apples: from 18.1 thousand tons in 2020 to 5.4 thousand tons in 2024, which is a decrease of more than 70%. This reduction may be due to both objective external circumstances (supply restrictions, increased transportation costs, currency fluctuations) and internal shifts towards partial import substitution or changes in consumer demand.

The most significant changes were recorded in the geographical structure of imports. At the beginning of the period, Iran and Uzbekistan dominated, with their combined share in 2020 exceeding 75% of total supplies. However, by 2024, there is a marked decline in their participation (to 37.9% and 2.2%, respectively), with Poland and China coming to the fore, with a share of 26.8% and 25.9%, respectively. These changes can be attributed to access to better quality products, diversification of supply chains, and new grade and packaging requirements.

Along with geographical variations, there was a significant fluctuation in cost parameters. The average contract price per ton varied from 0.22 to 0.52 USD, depending on the country of origin. The cheapest supplies were from Kazakhstan (0.22 USD/t), while imports from Poland were characterized by the highest price (0.52 USD/t). This indicates the presence of price differentiation due not only to distance and logistics, but also to the quality characteristics of goods, certification standards and the level of demand for specific apple varieties.

An additional analytical aspect is the change in the foreign exchange burden on the country's economy. Despite the overall reduction in the volume of imports, foreign exchange expenditures did not decrease proportionally, which indicates an increase in the unit cost of production and a potential impact on the price level within the country. This situation may increase the burden on the consumer and affect food availability for socially vulnerable groups of the population.

The analysis of economic ratios (share, volume, price) showed that the most balanced in terms of the "price-volume" ratio are supplies from China and Iran, while Poland provides a high-quality but more expensive segment. At the same time, the sustainability of supplies from such countries as Armenia, Lithuania, Turkey turned out to be low or unstable.

Taken together, the data obtained confirm the existence of a structural transformation of foreign trade policy in the fruit import sector, where priorities are shifting from regional to global suppliers. This requires public and private entities to develop more flexible strategies aimed at optimizing logistics costs, expanding the portfolio of trade partners, strengthening phytosanitary control and, most importantly, developing domestic apple production to reduce dependence on external conditions.

The results obtained in this section form the analytical basis for the subsequent transition to the formation of practical conclusions and economically sound recommendations for improving the foreign economic and agro-food policy of the Kyrgyz Republic.

4 Discussion

The results obtained in the course of the study indicate a complex and multifaceted transformation of apple imports to the Kyrgyz Republic in the period 2020-2024. The observed reduction in the volume of supplies and changes in their geographical structure should be considered not only as a statistical fact, but also as a reflection of deeper processes taking place in the national economy and in the global agri-food market. These processes affect trade and logistics chains, currency risks, sanitary barriers, as well as public policy in the field of food security and agriculture.

One of the key elements for discussion is the sustainability of external trade relations. Countries that previously held leading positions in terms of supply volumes (e.g. Iran and Uzbekistan) have shown a significant decline in activity. This can be attributed to both domestic political or sanctions restrictions and changes in logistical and pricing conditions. At the same time, the entry of suppliers from the European Union (in particular, Poland) opens up access to higher quality products, but at the same time increases foreign exchange costs and the total unit cost of production. Thus, the country is faced with a choice between

economic expediency (low price of Middle Eastern products) and quality strategy (higher cost, but reliability and standardization of supplies from the EU).

The structure of import dependence of the Kyrgyz Republic is also of interest from the point of view of agrarian sustainability. The decrease in import volumes can be interpreted in two ways: both as a negative phenomenon (deficit, price increase) and as a positive signal for localization of production. However, without direct evidence of increased domestic apple cultivation, such optimism may be premature. Consequently, parallel studies of the state and potential of domestic fruit growing are needed.

The analysis of price coefficients shows that the most economically advantageous supplies were made from China and Iran, with Poland characterized by a higher price. This confirms the international trend: developed countries supply more standardized and expensive products, which requires importing countries to plan foreign exchange expenditures more carefully, especially in conditions of unstable exchange rates.

It is also important to note that the lack of stable long-term supplies from a number of countries, such as Turkey, Armenia, Lithuania, poses a threat to the continuity of the commodity distribution chain. This strengthens the arguments in favor of diversifying foreign trade partners, creating strategic reserves of fruits and supporting domestic production. In addition, the situation with apple imports can be an indicator of the state of other commodity groups (pears, grapes, stone fruits), which expands the potential for cross-sectoral analysis.

Thus, the discussion of the research results allows us to conclude that structural shifts in apple imports are not an isolated phenomenon, but an element of a broader economic transformation that includes trade strategy, domestic production, logistics and consumer policy. Sustainable development of the agro-food complex of the Kyrgyz Republic in the coming years will largely depend on the ability to adapt the economy to these changes, to increase the level of self-sufficiency in fruit production and to ensure an effective system of monitoring of foreign economic risks.

5 Conclusions

Based on the analysis of statistical and economic data on imports of apples to the Kyrgyz Republic for 2020-2024, the following main conclusions are formulated:

- Import volumes of apples in physical terms decreased significantly from 18.1 thousand tons in 2020 to 5.4 thousand tons in 2024, indicating high volatility of supply and vulnerability of the food market to external fluctuations.
- The geographic structure of supplies has changed: the share of traditional partners - Iran and Uzbekistan - has decreased, while supplies from China and Poland have increased significantly. This indicates a reorientation of trade flows and a growing dependence on more distant and expensive destinations.
- The average contractual cost of imports ranged from 0.22 to 0.52 USD/ton. The most expensive were shipments from the EU, while the least expensive were from the near abroad. This reflects differences in logistics costs, quality standards and trade terms.
- The national currency burden on imports of apples decreased in absolute terms, but increased in relative terms - due to the appreciation of the unit of production. This may have a negative impact on the price level and availability of fruit for the population, especially in the conditions of inflation and reduced purchasing power.
- Some countries have shown instability in supply (Turkey, Armenia, Lithuania), which confirms the need to expand and diversify trading partners, as well as to strengthen strategic planning within the framework of food security.

The results emphasize the need for a comprehensive approach to the formation of foreign trade policy, including the development of its own apple growing base, support for farms, logistics clusters and export-import forecasting.

Thus, the current state and trends in apple imports require not only monitoring but also active intervention by public and private institutions to reduce external dependence, stabilize the domestic market and ensure sustainable food supply for the country.

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