

THE ROLE OF ECONOMIC ANALYSIS OF IMPORT COMPOSITION IN CUSTOMS AUDIT

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Abstract. The article examines the use of economic analysis of the import commodity structure for risk-based selection of customs audit targets. Structural changes by commodity group and trading partner, import dynamics, concentration levels, value variability and the share of customs benefits are analysed. Based on the findings, a composite index is proposed to identify priority areas for customs audit. The approach can support the preliminary screening of audit targets and the allocation of control resources to higher-risk areas.

Keywords: import composition, economic analysis, customs audit, risk management, customs payments, exemptions, concentration index, audit selection.

1. INTRODUCTION

Worldwide, customs authorities are an important state institution that coordinates foreign economic activity in a country's external trade, ensures the collection of revenues to the state budget, and safeguards public health and economic security.

The modern economy is increasingly becoming a complex system that constantly renews and regulates itself on the basis of in-depth analytical solutions, while remaining sensitive to various threats [1].

The digitalization of world trade, the growing volume of goods flows, and the increasing complexity of supply chains require customs authorities not to distribute control resources equally across all operations, but to direct them purposefully toward high-risk areas. Under these conditions, a control model based on prolonged detention of goods at the border increases the costs of legitimate trade and reduces the efficiency of customs administration.

For this reason, in international practice part of the control function has been shifted to the post-release stage, with customs audit being applied as an important tool of risk-based management [2; 3].

The World Trade Organization's Trade Facilitation Agreement establishes risk-based selection of a person or category of goods for post-release audit, and the use of audit results in subsequent risk-management processes [2].

The World Customs Organization defines customs audit as a process of assessing compliance with legislation through a systematic examination of an economic operator's commercial systems, contracts, financial and non-financial records, and other assets [3].

This approach envisages the use of criteria such as the value of goods, import volume, type of goods, prior violations, and the risk of revenue loss in selecting audit targets.

In this regard, it is important to further improve customs audit on the basis of the results of economic analysis.

Economic analysis makes it possible to identify the actual state of affairs in the customs sphere, to analyse problems, and to study the factors affecting efficiency. Economic analysis is a set of scientific methods aimed at revealing the content of economic processes and indicators, their development dynamics, and the influence of various factors [14].

In Uzbekistan as well, the institutional framework is being improved for strengthening post-release control, organizing customs audit in desk and field forms on the basis of data analysis, assessing the level of legal compliance of business entities, and linking audit outcomes to the level of risk [9–12]. Under the current procedure, the selection of the form of audit is envisaged on the basis of data analysis carried out through the “Customs Audit” information system [10].

Starting from 1 July 2026, the introduction of the ‘advisory auditor’ principle and the inclusion of audit results in the sustainability rating of business entities have been established [11].

At the same time, along with data on individual declarations or business entities, the practice of audit selection also requires a systematic assessment of long-term changes in the commodity composition of imports. The share of a commodity group in imports, its growth rate, the variability of price and value indicators, the weight of customs benefits, and the degree of dependence on particular countries provide important information for allocating audit resources.

However, practical approaches linking the results of economic analysis of import composition with customs audit planning have not been sufficiently systematized in the national scientific literature.

The purpose of the study is to assess the dynamic and structural characteristics of the composition of imported goods in 2016–2025 and, on the basis of the findings, to propose a mechanism for the preliminary screening of priority commodity groups for customs audit.

The scientific novelty of the article lies in the development of a sector-level audit priority index that combines the share in imports, long-term growth, variability, and the weight of customs benefits.

2. LITERATURE REVIEW

The organization of risk-based customs control is examined in international standards and scientific research from the standpoint of two interrelated goals — protecting budget revenues and facilitating legitimate trade. The World Customs Organization's guidelines on customs audit note that the post-audit system should be harmonized with selective control at the border, and that audit targets should be selected taking into account risk assessment and available human resources [3].

The guidelines emphasize that strategic risk assessment covers an entire sector or group of importers, while tactical assessment covers a specific importer and specific transactions.

Using the example of Senegal, an important research effort in the field of data mining and risk management in customs administration systems — carried out by Anne-Marie Geourjon, Bertrand Laporte, Ousmane Coundoul, and Massene Gadiaga — demonstrated that data mining and statistical scoring methods improve the quality of selection for control [5].

The authors demonstrate that conducting fewer but more accurate inspections contributes to the efficient use of customs resources.

Laporte, for his part, revealed the institutional significance of data-analysis-based risk-management models in the customs systems of developing countries [6].

Recent studies have extensively addressed the use of big data, artificial intelligence, and machine-learning technologies in customs risk management.

Sruti Vijayakumar, an expert of the Directorate General of Analytics and Risk Management (DGARM) under India's Central Board of Indirect Taxes and Customs (CBIC) and one of the leading officials of the National Customs Targeting Centre, emphasizes that data- and economic-analysis-based management increases the possibility of early detection of foreign trade chain risks and of organizing control in a targeted manner [7].

In a study published in the World Customs Journal in 2019, economist Xin Zhou demonstrates that, unlike the traditional statistical assessment models of Geourjon and Laporte, applying Machine Learning and Cost-Sensitive Classification methods in the process of risk analysis in customs audit allows artificial-intelligence algorithms to operate while taking into account the cost of errors.

Zhou and co-authors proposed cost-sensitive classification methods that account for the problem of class imbalance in detecting customs risks [8].

Although these studies focus on forecasting models at the declaration level, their common conclusion is that risk assessment should rely on a reliable database, correctly chosen indicators, and a continuous feedback mechanism.

A review of the existing literature shows that, alongside micro-level data, the macroeconomic condition of commodity sectors is also important in selecting audit targets. When conducting research on a particular commodity sector, the World Customs Organization recommends studying its volume, production and consumption indicators, the number of participating enterprises, technological characteristics, and possible types of violations [3].

From this point of view, the long-term dynamics of the composition of imported goods can serve as the first stage in forming a sector-level risk map for customs audit.

3. RESEARCH METHODOLOGY

The informational basis of the study consists of aggregated data for 2016–2025 on the foreign trade regime, the three-level economic grouping of goods, the trading partner country, statistical value (box 46 of the customs cargo declaration), customs payments actually collected, and payments accounted for as benefits.

The analysis was carried out on the basis of the Customs Committee database (a total of 63,028 data rows exist for export–import operations carried out in 2016–2025, of which 44,441 relate to the import regime and 18,587 to the export regime); the article analyses only the data of the import regime.

In the database, statistical value is expressed in thousand US dollars, while customs payments and benefits are expressed in soums. For the purposes of the analysis, statistical value was converted into billion US dollars, and payments into trillion soums.

At the first level, there are 20 commodity groups, of which 19 active groups were recorded each year. The number of commodity types at the third level increased from 1,339 in 2016 to 1,517 in 2025.

The economic analysis of import dynamics was carried out using the following types of analysis.

In particular, in assessing the growth rate and structural share, the annual growth rate was calculated using the following formula.

Dynamic analysis (growth rate — T_y): $T_y = (I_y / I_{y-1} - 1) \times 100$

where I_y is the statistical value of imports in year y .

Structural analysis (share — S_{iy}):

The structural share of a commodity group in total imports was determined by the formula $S_{iy} = I_{iy} / \Sigma I_{iy} \times 100$.

Concentration analysis:

The Herfindahl–Hirschman Index was used to compare concentration by commodity and by country: $HHI_y = \Sigma S_{iy}^2$.

Variation-statistical analysis:

The variability of a commodity group's value across years was assessed through the coefficient of variation $CV_i = \sigma_i / \bar{I}_i \times 100$.

The share of customs benefits applied to imported goods within total payments was calculated using the formula $E_i = P^{free}_i / (P^{paid}_i + P^{free}_i) \times 100$.

Fiscal-benefits analysis:

To assess the preliminary priority of sectors for customs audit, the following composite index was proposed:

$$R_i = 0.35Z(S_i) + 0.25Z(G_i) + 0.20Z(CV_i) + 0.20Z(E_i)$$

where Z is the min–max normalization of an indicator to the range 0–1; S_i is the import share in 2025; G_i is growth over 2016–2025; CV_i is variability; and E_i is the share of benefits in 2025.

To limit the effect of artificially high growth arising from the Customs Committee's 2016–2025 database, the index was calculated only for commodity groups whose share in total imports in 2025 was at least 1 percent.

The proposed index is not a tool for the final selection of audit targets. It provides preliminary screening at the level of the commodity sector.

The final decision should be supplemented with the importer's compliance history, price and code anomalies in declarations, transactions with related parties, tax and accounting data, results of previous audits, and operational intelligence.

A limitation of the study is that the available database does not cover the importer's taxpayer identification number, individual HS codes, physical quantity, unit price, or detected violation outcomes. Therefore, the findings of the article indicate economic risks at the sector level but do not directly confirm the existence of violations.

4. RESEARCH RESULTS

4.1. Dynamics of import value and customs payments

The results of the analysis show that the statistical value of imports followed a steady upward trend in 2016–2025.

The value of imports, which stood at 11.33 billion US dollars in 2016, reached 42.08 billion US dollars in 2025.

Over the ten-year period, total growth amounted to 271.5 percent, with an average annual growth rate of 15.7 percent. The highest annual growth rates were recorded in 2018 (43.8%), 2023 (30.6%), and 2019 (26.2%). Imports declined by 8.7 percent in 2020 and by 4.1 percent in 2024.

Along with the growth in import volume, customs payments actually collected increased from 5.56 trillion soums in 2016 to 72.10 trillion soums in 2025. Payments accounted for as benefits also grew, from 11.07 trillion to 49.25 trillion soums, although their share in total assessed payments declined from 66.6 percent to 40.6 percent.

This situation may be related to changes in import value, the exchange rate, the tax base, tariff rates, and the composition of benefits; additional micro-level data are required to isolate the individual effect of each of these factors.

Table 1.

Main indicators of import and customs payments, 2016–2025

Year	Import, bn USD	Growth, %	Payments collected, trln soums	Benefit, trln soums	Benefit share, %	Number of countries	Commodity types
2016	11.33	—	5.56	11.07	66.6	127	1339
2017	12.04	6.2	7.62	19.27	71.7	135	1371
2018	17.30	43.8	11.00	38.53	77.8	135	1416
2019	21.83	26.1	16.74	47.37	73.9	146	1449
2020	19.92	-8.7	25.20	34.23	57.6	135	1439
2021	23.73	19.1	35.72	33.09	48.1	147	1464
2022	28.16	18.6	43.71	40.51	48.1	154	1450
2023	36.78	30.6	54.35	54.34	50.0	162	1491
2024	35.29	-4.1	58.26	48.51	45.4	151	1498
2025	42.08	19.3	72.10	49.25	40.6	158	1517

Source: author's calculations based on the Customs Committee information system database.

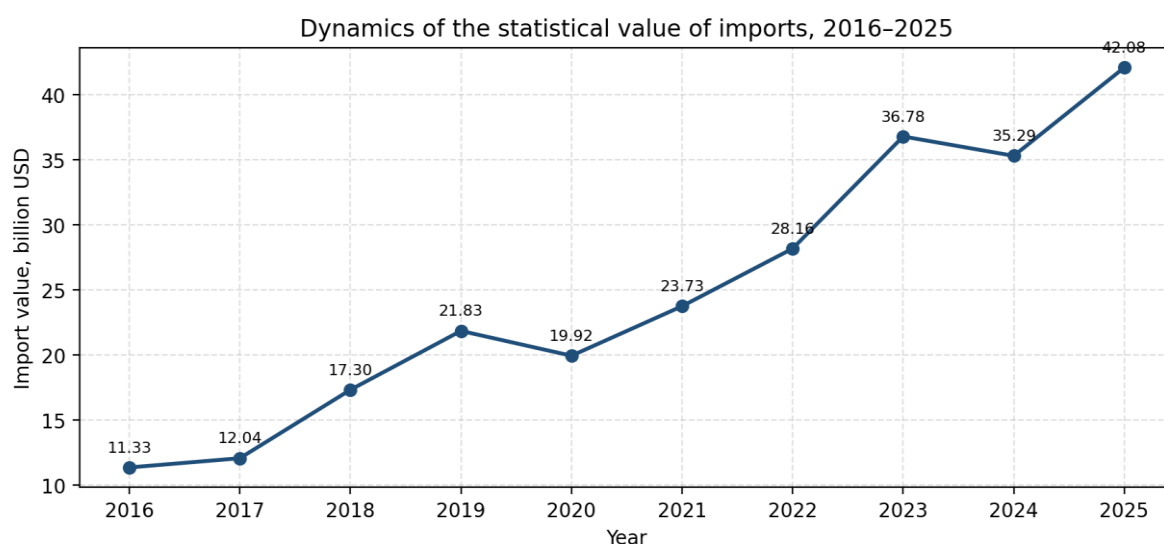


Figure 1. Dynamics of the statistical value of imports, 2016–2025

4.2. Commodity composition and concentration of imports

In 2025, technological equipment ranked first in the composition of imports with a 16 percent share. It was followed by metals and metal products (12.4%), transport and spare parts (11.9%), food products (11.9%), and electrical equipment and its components (10.7%).

These five groups together accounted for 62.9 percent of total imports. In 2016 the share of the top five groups was also 62.9 percent, although their internal composition has changed.

On the basis of this economic analysis — more precisely, trade structure analysis, or market concentration analysis — the HHI (Herfindahl–Hirschman Index) by country declined from 1,072.1 points in 2016 to 998.3 points in 2025. This indicates that, while the high-share groups in the import composition were preserved, the distribution among them became somewhat more even.

Here, HHI is an indicator that measures the degree of concentration (dependence on a few participants) in a market or trade structure; it is calculated by squaring the share (in percent) of each country and summing the results:

$$HHI = \sum (share_i)^2$$

Note. Range: from 0 (a very large number of countries, each with a share close to zero — full diversification) to 10,000 (a single country with 100% — full monopoly).

Below 1,000 — low concentration (competitive/diversified structure); 1,000–1,800 — moderate concentration; above 1,800 — high concentration (strong dependence).

At the same time, the share of technological equipment decreased from 21.4 percent to 16.0 percent, while the share of fuel-and-energy and petroleum products increased from 5.3 percent to 9.6 percent. High growth in absolute value was also observed in the metals, electrical equipment, transport, and food groups.

Table 2.

Composition of imports by major commodity groups, 2025

Commodity group	Import, bn USD	Share, %	Payments collected, trln soums	Benefit, trln soums
Technological equipment	6.75	16.0	5.95	6.35
Metals and metal products	5.22	12.4	7.94	3.97
Transport and spare parts	5.01	11.9	10.66	10.99
Food products	4.99	11.9	8.71	11.68
Electrical equipment and its components	4.50	10.7	8.80	4.50
Fuel-energy and petroleum products	4.05	9.6	6.54	2.44
Plastics and rubber products	2.20	5.2	5.21	1.99
Chemical industry products	2.16	5.1	4.22	1.77
Pharmaceuticals and medical goods	1.96	4.7	3.32	0.19
Wood and timber products	1.09	2.6	1.77	1.03

Source: author's calculations based on the Customs Committee information system database.

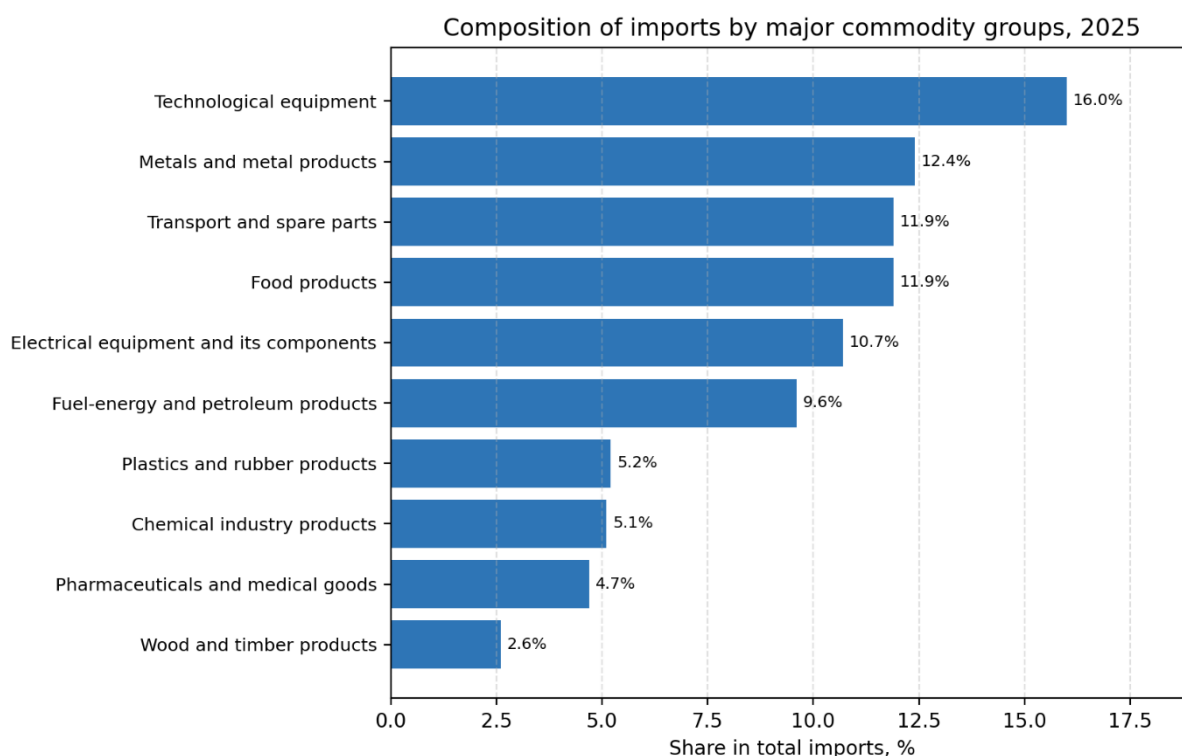


Figure 2. Composition of imports by major commodity groups, 2025

In addition, let us examine some of the factors affecting changes in import dynamics. In particular:

A) Based on the factor of economic regulation through eliminating shortcomings in the system for controlling the official import of goods:

Let us examine this using the example of mobile communication devices in the electrical engineering industry. In particular:

In 2021, on the initiative of the Customs Committee, the information systems of the customs authorities and the “UZIMEI” center were integrated.

As a result, the requirement to separately indicate the IMEI numbers of mobile communication devices in the customs cargo declaration, together with the introduction of a mechanism confirming that devices are being brought in personally by travelers at the border, led to a sharp increase in the official import of mobile devices (Table 3).

Table 3.

Results of curbing the illegal trade of mobile communication devices

Year	2017	2018	2019	2020	2021	2022	2023	2024	2025
Official imports (value, mn \$)	2.2	2.2	23	107	203	199	240	376	615
Quantity (mn units)	0.04	0.054	0.54	1.33	3.99	2.96	3.37	4.19	4.61

Year	2017	2018	2019	2020	2021	2022	2023	2024	2025
Payments collected (bn soums)	4.95	5.4	37.35	266.02	497.87	476.35	512.66	846.23	1,391.3

Source: author's calculations based on the Customs Committee information system database.

As a result, in 2025 (compared with 2017):

— as a result of curbing illegal trade, the volume of official imports increased 96-fold (from 48 thousand units imported in 2017 to 4,609 thousand units in 2025), and the value increased by 280% (from 2.2 million dollars in 2017 to 615 million dollars in 2025);

— customs payments collected increased 281-fold (from 5 billion soums paid in 2017 to 1 trillion 391 billion soums in 2025).

For reference, the share of officially imported mobile devices registered in the “UZIMEI” system among legal entities stood at 10% in 2021, reaching 69% in January 2025 and 91% in December 2025.

B) Based on the factor of regulation through non-tariff measures:

Let us examine this using the example of cigarette products in the tobacco industry.

In particular:

In drafting Presidential Decree No. PF-84 of 3 June 2024 “On measures to strengthen the regulation of the alcohol and tobacco products market and to prevent their illegal circulation,” and on the basis of a proposal by the Customs Committee aimed at preventing illegal schemes observed in practice, a requirement was established starting in 2024 whereby, for tobacco products carried in transit, the authorized person (the cargo owner or the carrier) must transfer the amount of customs payments to the customs authorities' deposit account in advance (Table 4).

Table 4.

Results of curbing the illegal trade of cigarette products and drawing them into official imports

Year	2017	2018	2019	2020	2021	2022	2023	2024	2025
Detected violation volume (mn packs)	0.07	0.29	0.34	1.01	1.58	1.61	5.74	2.97	1.48
Detected violation value (bn soums)	0.74	2.78	5.65	15.44	18.94	20.21	105.94	62.07	47.91
Volume in official imports (thousand tons)	4.1	3.3	4.3	4.2	4.31	6.24	6.66	6.31	9.5
Customs value in official imports (mn \$)	26	20	26.3	27.9	35.2	55.5	75	95.4	118.6

Year	2017	2018	2019	2020	2021	2022	2023	2024	2025
Payments collected (bn soums)	106.63	36.17	81.73	107.28	157.19	205.89	305.41	825.42	1,002.1

Source: author's calculations based on the Customs Committee information system database.

As a result, in 2025 (compared with 2023):

— as a result of curbing illegal trade, the volume of official imports increased by 58% (from 6.6 [thousand tons] imported in 2023 to 9.5 thousand tons in 2025), and the value increased by 59% (from 75 million dollars in 2023 to 118.6 million dollars in 2025);

— customs payments collected increased 3.5-fold (from 305 billion soums in 2023 to 1 trillion soums in 2025);

— illegal cross-border movement decreased 4-fold (from 5.7 million packs detected in 2023 to 1.4 million packs in 2025).

Table 5.

Results achieved in the non-tariff regulation of tobacco transit

Year	2021	2022	2023	2024	2025
Weight (tons)	1,849.37	6,633.37	12,558.66	2,430.41	354.07
Value (mn \$)	14.183	85.214	176.716	32.606	2.456

Source: author's calculations based on the Customs Committee information system database.

The transit of tobacco products (Table 5) decreased in weight 7-fold compared with 2024 (from 2,430 tons in transit in 2024 to 354 tons in 2025).

In addition, tariff and non-tariff factors affecting the quantity, value and composition of imported goods, as well as external factors (the global geopolitical situation, natural disasters, changes in the foreign trade policy of other countries) affect the reduction of the flow of imported goods from certain countries.

C) Based on the introduction of low-rate customs duties in import tariff policy, the resulting increase in the inflow of certain foreign goods into the Republic, and the consequent inversely proportional negative effect on domestic manufacturers through a higher cost price of production:

Let us examine this using the example of electrical equipment (switches, automatic circuit breakers, lamp sockets, plugs, sockets, etc.) in the electrical engineering industry. In particular:

Table 6.

Growth rates in the import of electrical equipment products due to the existing low customs duty rate

Year	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Customs value (mn \$)	29.27	23.03	26.67	59.11	48.68	61.32	81.96	116.51	98.21	112.72

Year	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Applied customs benefit (bn soums)	18.68	31.61	55.64	89.26	95.76	118.31	170.09	242.45	205.83	235.17
Payments collected (bn soums)	21.64	15.71	10.84	48.42	46.81	59.09	77.65	80.5	66.01	77.15

Source: author's calculations based on the Customs Committee information system database.

The customs payments made and the customs benefits applied relative to the goods in the import of these electrical equipment products were studied using the fiscal-benefits analysis method (Table 6).

The fiscal-benefits analysis was carried out using the formula:

$$E_i = P_i^{\text{free}} / (P_i^{\text{paid}} + P_i^{\text{free}}) \times 100.$$

This indicator expresses, as a percentage, what portion of the total potential customs payment (i.e., the full amount that would be due in the absence of benefits) was actually waived as a benefit.

Table 7.

Dynamics of the share of customs benefits in total potential payments, E_y (%)

Indicator	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Benefit share, E_y (%)	46.3	66.8	83.7	64.8	67.2	66.7	68.7	75.1	75.7	75.3
Paid share (100-E_y), %	53.7	33.2	16.3	35.2	32.8	33.3	31.3	24.9	24.3	24.7

Source: author's calculations based on the Customs Committee information system database.

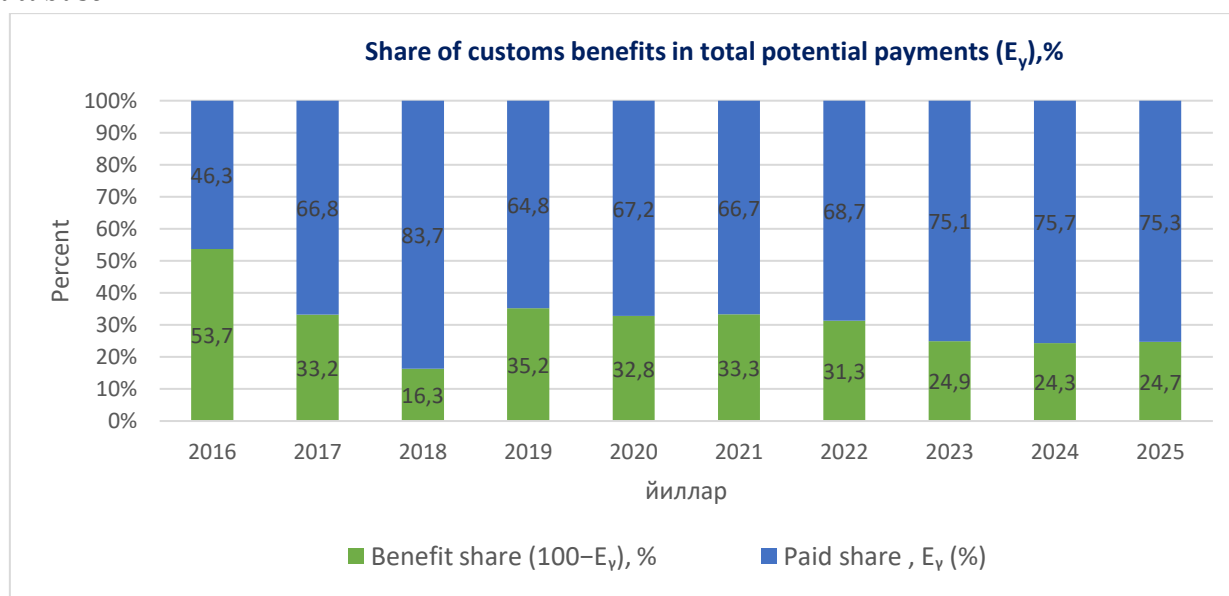


Figure 3. Dynamics of the share of customs benefits in total potential payments (E_v),

%

The calculations show that in 2016 only 46.3 percent of the potential payment was waived as a benefit (i.e., more than half of the payment — 53.7% — was actually collected), whereas by 2018 this indicator had risen sharply to 83.7 percent. In subsequent years (2019–2022) the indicator stabilized within the range of 65–69 percent, and in 2023–2025 it consolidated at an even higher level of 75.1–75.7 percent (Figure 3).

For the entire period, the average share of benefits amounted to 69 percent.

In other words, in recent years approximately three-quarters ($\frac{3}{4}$) of the potential customs payment has actually been accounted for as a benefit, with only about one-quarter ($\sim 25\%$) being collected into the state budget.

This trend — the share of benefits remaining consistently high alongside the growth in import volume — means that a significant part of the fiscal burden is being borne by the state.

In recent open dialogues held at the Customs Committee, local entrepreneurs (LLC “Tosh nur plast,” LLC “MEGA LINE SYSTEMS,” “PROGRESS ENERGY” JSC, and others) have pointed out that, as a result of the low customs duty rate established in Uzbekistan for electrical equipment goods (lamp sockets, plugs and sockets, switches, automatic circuit breakers, disconnectors, and protective devices such as fuses) — set at 10%, but no less than 0.3 US dollars/kg — local manufacturers are unable to compete with goods imported from abroad; the resulting increase in production cost has had a negative impact on the financial condition of a number of businesses, leading to consequences that extend as far as the loss of existing jobs.

The timely identification of such situations, and the submission of scientifically substantiated conclusions based on economic analysis by the customs authorities to the relevant ministries and agencies, is ensured with a view to protecting the national economy.

4.3. Changes in import geography

The composition of imports by country shows a higher degree of concentration than by commodity group. In 2016, the Russian Federation held a 20.1 percent share, the People's Republic of China 19.7 percent, and Kazakhstan 8.3 percent (Table 6b).

The combined share of these three countries amounted to 48.1 percent. By 2025, China's share had reached 34.1 percent, Russia's share 19.7 percent, and Kazakhstan's share 7.9 percent, bringing the combined share of the top three countries up to 61.8 percent.

Thus, while relative diversification has been observed in terms of commodity types, dependence on supplier countries has intensified. This situation increases the need for a more in-depth examination, in customs audit, of specific commodity–country combinations, related suppliers, transit and re-export chains, and price formation.

Table 8.

Distribution of imports by main partner countries, 2025

Country	Import, bn USD	Share, %
China	14.36	34.1
Russia	8.29	19.7
Kazakhstan	3.34	7.9

Country	Import, bn USD	Share, %
Turkey	1.77	4.2
South Korea	1.55	3.7
Germany	1.15	2.7
India	1.14	2.7
Turkmenistan	1.05	2.5
Belarus	0.74	1.7
USA	0.57	1.3

Source: author's calculations based on the Customs Committee information system database.

4.4. Significance of customs payments and benefits for audit

Analysing customs payments and benefits jointly by commodity group makes it possible to assess the potential scale of fiscal risk.

In 2025, 10.66 trillion soums in payments were collected for transport and spare parts, and 10.99 trillion soums were accounted for as benefits.

For food products, these indicators amounted to 8.71 and 11.68 trillion soums respectively, and for technological equipment to 5.95 and 6.35 trillion soums.

Because both the volume of imports and the amount of benefits are high in these groups, compliance with the conditions of benefits, the intended use of goods, and their correct classification under the HS could be one of the priority directions of audit.

However, a high share of benefits does not in itself imply a violation. In certain sectors, legitimate benefits linked to investment, social significance, or state programs may be widely applied.

Therefore, economic analysis should be regarded only as a risk-signalling tool and should be compared with the legal basis of the benefit, its validity period, the conditions for its intended use, and the importer's subsequent transactions.

Although pharmaceuticals and medical goods accounted for 4.7 percent of total imports in 2025, the share of benefits in the sum of payments and benefits was around 5.4 percent.

In contrast, for mineral products this share amounted to 77.2 percent. This difference shows that applying the same audit criteria uniformly across commodity groups is not appropriate, and that a separate risk profile needs to be developed for each sector.

4.5. Assessment of priority commodity groups for customs audit

According to the results of the proposed composite index, fuel-and-energy and petroleum products, food products, electrical equipment and its components, transport and spare parts, technological equipment, and metals and metal products emerged as priority areas of analysis for forming the audit plan at the sector level.

These groups simultaneously exhibited several of the following: a high share in imports, long-term growth, year-on-year variability, or a significant weight of benefits.

A high value of the index does not mean that violations exist in that group; rather, it indicates the appropriateness of conducting more in-depth analysis before allocating audit resources.

For example, the import value of fuel-and-energy products grew by 578.6 percent between 2016 and 2025, with a coefficient of variation of 67.1 percent. For technological equipment, although growth was comparatively lower, its 16 percent share and 51.6 percent weight of benefits in 2025 identify it as a sector of high fiscal significance (Table 9).

Table 9.

Preliminary priority assessment of commodity groups for customs audit

Commodity group	Index, points	2025 share, %	2016–2025 growth, %	CV, %	Benefit share, %
Fuel-energy and petroleum products	71.1	9.6	578.6	67.1	27.2
Electrical equipment and its components	61.6	10.7	379.9	60.5	33.8
Food products	59.3	11.9	278.4	48.4	57.3
Transport and spare parts	57.1	11.9	284.5	46.8	50.8
Metals and metal products	54.2	12.4	367.2	40.0	33.4
Technological equipment	52.0	16.0	178.9	28.6	51.6
Textile products	37.9	1.9	474.0	47.6	28.3
Mineral products	35.3	1.3	299.2	37.0	77.2

Source: author's calculations based on the Customs Committee information system database.

Note: the index was calculated for commodity groups whose share in imports in 2025 was at least 1 percent.

5. DISCUSSION

The findings obtained show that economic analysis of the composition of imported goods has practical significance at three stages of customs audit.

At the first stage, macro- and meso-level analysis identifies priority sectors for the audit plan.

At the second stage, segmentation is carried out within the selected sector by importer, HS code, country of origin, transaction price, and type of benefit.

At the third stage, documents, accounting data, and results of previous controls are examined for a specific business entity or transaction.

The results of commodity and geographic concentration identified in the analysis indicate the appropriateness of forming a risk profile in customs audit according to a 'sector — country — importer' triad model.

For example, if a commodity group with a high share in total imports is supplied from only one or two countries, comprehensive audit criteria can be developed covering price formation, related parties, transport costs, and documents confirming the origin of goods.

In analysing customs benefits as well, differences between sectors must be taken into account. A high amount of benefits indicates that the consequences of fiscal risk could be significant, but it does not determine the probability of that risk. Assessing the probability requires micro-indicators such as violations of the conditions of the benefit, deviation from its intended use, changes in the commodity code, resale, or imports disproportionate to production capacity.

Therefore, the benefit-share component of the composite index should be interpreted as a criterion reflecting the fiscal consequence of audit, not its probability.

The renewal of the customs audit procedure in Uzbekistan in 2025–2026 and the introduction of the ‘advisory auditor’ principle strengthen the preventive function of economic analysis [10; 11].

Identifying recurring errors and anomalies by commodity group makes it possible not only to conduct audits, but also to inform businesses in advance about typical errors, develop voluntary-correction mechanisms, and reduce the control burden for compliant entities.

The findings of the study are consistent with the conclusions of Anne-Marie Geourjon and co-authors that data analysis improves the selectivity of control [5], as well as with the recommendations of the World Customs Organization on taking into account the volume of the commodity sector, the type of import, and the risk of revenue loss when selecting audit targets [3].

The distinctive contribution of the article lies in applying these approaches to Uzbekistan's import composition data for 2016–2025 and in proposing a simple, interpretable priority index at the level of sectors, industries, and countries.

6. CONCLUSIONS AND PROPOSALS

The analysis carried out on the basis of data for 2016–2025 showed that the statistical value of imports grew from 11.33 billion to 42.08 billion US dollars, with total growth of 271.5 percent and average annual growth of 15.7 percent.

In terms of commodity composition, the share of the top five groups remained almost unchanged at 62.9 percent, although the relative share of technological equipment declined while the importance of fuel-and-energy, metal, electrical-equipment, and transport products increased.

In this respect, the decline in the concentration index by commodity group indicates a relative diversification of the import composition.

By country, however, concentration increased considerably: the share of the top three countries rose from 48.1 percent to 61.8 percent, and the HHI (Herfindahl–Hirschman Index) rose from 1,008.3 to 1,684.9 points.

Therefore, when conducting customs audit on the basis of an analysis of import conditions, it is necessary to assess not only commodity risk but also the risk associated with the supplying country and the trade chain.

The findings of the study give rise to the following proposals:

- ✓ introduce, in forming the annual customs audit plan, a sector-level analysis covering indicators of import commodity composition, long-term growth, variability, fiscal significance, and geographic concentration;
- ✓ pilot the proposed audit-priority index in the “Customs Audit” information system as a module for the preliminary screening of sectors, and regularly recalibrate it on the basis of audit results;
- ✓ develop detailed risk profiles for priority commodity groups by HS code, unit price, net weight, country of origin, importer, and type of benefit;
- ✓ designate, as a separate direction of audit in sectors with high benefits, the monitoring of the intended use of goods, their conformity with production capacity, and subsequent compliance with the conditions of benefits;
- ✓ feed audit results back into the risk-management system, provide explanations to businesses on identified typical errors, and reduce the frequency of control for compliant entities;
- ✓ in future research, empirically test the predictive capacity of the index using logistic regression, decision trees, or other machine-learning models, based on declaration- and importer-level data, audit results, and indicators of violations;
- ✓ sign memoranda with international auditing and accounting organizations (such as ISACA — Information Systems Audit and Control Association; ACCA — Association of Chartered Certified Accountants; ICAEW — Institute of Chartered Accountants in England and Wales) and, by reaching agreements on membership fees, examination fees, and training programs, take measures to increase the number of internationally certified experts from Uzbekistan;
- ✓ review the existing national auditing and accounting institutions in the Republic of Uzbekistan, and in the future establish an internationally recognized independent audit certification center in the country (a national ISACA-type body or a partner organization);
- ✓ develop a conceptual model along the chain: **economic analysis → formation of a risk map → creation of a risk profile → evaluation of customs audit results.**

In addition, the scientific study arrives at the following conclusions:

- ✓ ensuring economic security: since excessive dependence on imports may pose a risk to the stability of the national economy, examine the high degree of dependence on external markets for strategic goods — food, energy resources, industrial equipment, and pharmaceuticals;
- ✓ ensuring foreign trade balance: since an imbalance between imports and exports may lead to a foreign trade deficit, effectively manage the state's foreign trade policy through analysis of import dynamics and composition;
- ✓ improving customs-tariff policy: given that economic analysis of imported goods helps to establish tariff and non-tariff restrictions on a scientific basis, protect domestic manufacturers and shape a competitive environment;
- ✓ increasing state budget revenues: since import operations are an important source of customs payments, increase budget revenues through analysis of the value of imported goods, the Harmonized System (HS) nomenclature, and the level of risk;
- ✓ combating smuggling and the shadow economy: use modern economic-analysis methods to identify ‘disguised’ import operations that create economic risk, assess the true value of goods, and reduce illegal turnover;

✓ developing domestic production: analysing the composition of imports to identify localization opportunities and assess the feasibility of domestic production of goods is important for shaping an import-substitution policy.

In conclusion, it is scientifically substantiated that improving the economic analysis of imported goods in Uzbekistan is an important factor in raising the efficiency of foreign trade, strengthening economic security, shaping a competitive national economy, and modernizing customs administration.

Overall, regular economic analysis of the composition of imported goods expands the information base of customs audit, helps in the well-founded selection of audit targets, and makes it possible to concentrate control resources on directions of high fiscal and economic significance.

In this respect, sector-level analysis does not replace the final decision but serves as a starting point for the in-depth assessment of risks at the level of the business entity and the transaction.

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