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MORPHOLOGICAL PARAMETERS IN THE UPSTREAM REACH OF A FLOW CONSTRICTED BY A SPUR DIKE

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ABSTRACT

This article examines the organization of customs transit and the ongoing development of the customs information system in the Republic of Uzbekistan, with particular attention to the digitalization of transit procedures. The study reviews international experience in customs transit management, especially the practices of developed countries and the European Union's New Computerised Transit System (NCTS). The main stages and functional elements of customs transit information-system algorithms are analyzed in order to identify approaches that may improve the efficiency, transparency, and control of transit operations. Particular attention is given to the processing of transit cargo, information exchange between customs authorities, and the use of digital tools for monitoring the movement and arrival of goods. Based on the comparative analysis, the article proposes a multi-stage customs transit management algorithm for Uzbekistan's E-Tranzit information system. The proposed approach is intended to strengthen customs control, support multimodal transportation, improve the coordination of transit procedures, and create more efficient conditions for foreign trade participants.

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Introduction

In recent years, customs administrations in many countries, landlocked countries are paying particular attention to customs transit issues. A study of the experience of developed countries shows that the path to effective customs transit lies through digitalization and information exchange between customs services of all countries along the international supply chain.people's trade.

For example, the European Union has introduced a new computerized transit system, the New Computerised Transit System (NCTS) was introduced and has been mandatory for all authorised consignees/shippers since 1 April 2006. The following European Free Trade Association countries are also connected to this system: Iceland, Liechtenstein, Norway, Switzerland, Turkey and North Macedonia.

To control transit in Central America, aThe Transit International Merchandise (TIM) system operates in Mexico, Nicaragua, Honduras, El Salvador, Guatemala,Costa Rica and Panama.

In East Africa, a system was established to control goods in transit.The RECTS system was created, uniting Uganda, Rwanda, Burundi,South Sudan, Democratic Republic of the Congo. In the Russian

Federation, there is software that allows for the control of goods transit: AS KTT-2, EAIS TO, KPS "Transit operations", KPS "Completion of operations"tions", AS "PP" (Afonin, 2022).

After successful tests in Cambodia, Laos, Malaysia, Singapore, Thailand and Vietnam was officially on November 30, 2023, the ACTS customs transit system for Southeast Asian countries, was launched (Lozinsky & Sazonov, 2022).

Since 2022, customs transit management in the Republic of Uzbekistan has been carried out using the new E-Tranzit information system, which enables decision-making based on the automation of information processes and technologies at all customs posts in the country. The E-Tranzit information system has proven its effectiveness over the course of its operation: over the course of one year, it processed 268,156 transit declarations, 61,176 documents under Book 11, and 182,120 other documents (Mukhtorov et al., 2023). At the same time, an analysis of the system's performance over the past period indicates that there are customs operations not covered by it, which significantly impacts the efficiency of customs authorities. Furthermore, the integration of the E-Tranzit information system with recognized international information systems, such as eTIR, NCTS, and the EAEU information systems, is a pressing issue.

Method

The study employed a systems approach, analysis, and digital metrics. Mass observation methods were used to collect and analyze data from social networks.

Results

The aim of this work was to develop proposals for improving the algorithm of the E-Tranzit information system for managing customs transit, based on the results of a comparative analysis with the information system of the European Union NCTS.

The legal basis of the European common method of transporting goods is based on uniform laws, regulations and standards of the European Union in the field of civil law, tax, banking and insurance legislation, the EU road code, etc. One of the key document is the document for organizing transit is the agreement between the countries of the European Union and the countries of the European Free Trade Association on Trade on a Single Administrative Document for the Transport of Goods (SAD Convention of May 22, 1987). In this regard, cargo transit is divided into the following types: internal, external; general, international, and postal.

"Intrastate customs transit" is a process—a transit system applicable only within a single country or customs territory, in which the departure and destination offices are located within the same territory. Any required security measures apply only to transit movements within the territory controlled by the customs service.

"International customs transit" is a transit movement that is part of a single transit customs operation in the course of which one or more customs borders are crossed in accordance with a bilateral or multilateral agreement. This agreement usually establishes the form of declaration of goods For customs transit And, If This required, guarantee applied in each territory controlled by the parties to this agreement (World Customs Organization, 2017).

As part of the European Union transit system NCTS, the following subsystems are implemented (Aldaniyazov, 2021):

subsystem for generating and transmitting data in the Single Administrative Message (SAM) format. Preliminary notification of customs authorities of countries of departure is being carried out With usingprinciple

"feedback", which allows for faster data transfer and confirmation of the arrival of cargo and transport vehicles to the destination to the destination;

a subsystem for managing a database of lost, stolen, and counterfeit customs seals and stamps used to issue cargo transportation notifications and surety certificates;

product coding subsystem;

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warning subsystem that allows the transmission of information notification on the transportation of high-risk goods from the customs point of shipment to customs transit points and customs points of destination.

The technology for controlling transit cargo using NCTS includes the following steps.

The customs declaration is submitted to the customs authority of the departure of the cargo in electronic form by the foreign trade participant. The electronic declaration can be prepared independently or through thecash from customs authorities of departure.

The customs declaration must contain all required data and comply with format specifications, since the system controls the reliability of data automatically. If any discrepancy with the approved data is found and the customs declaration does not meet the requirements, NCTS will note this and refuse to accept the customs declaration. In this case, the foreign trade participant must make corrections to accept the customs declaration (Figure 1).

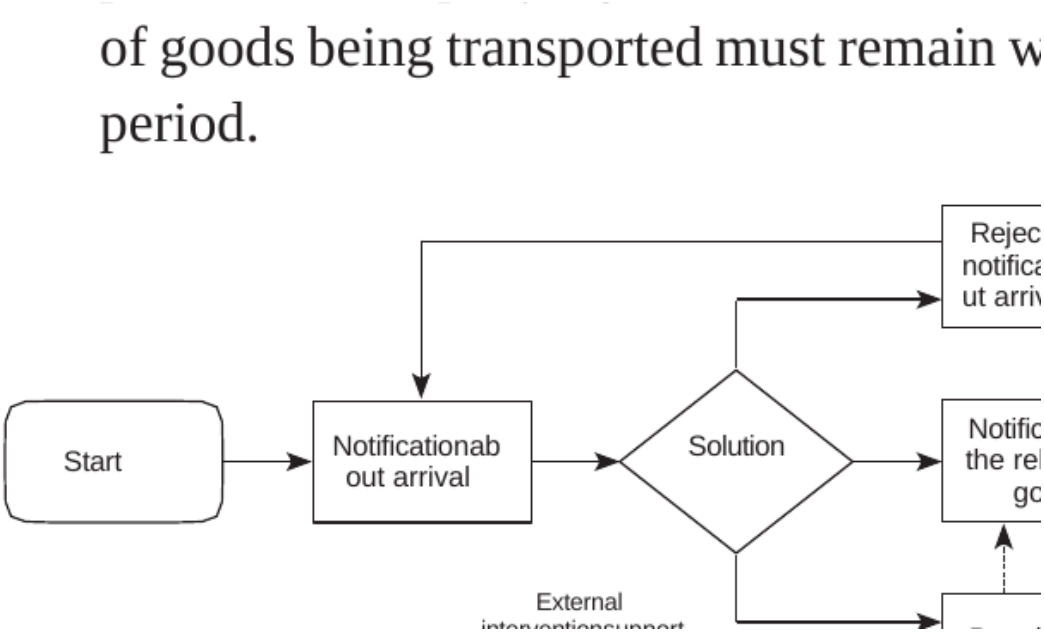
Once a customs declaration is accepted, NCTS registers it and assigns a unique registration number.

After receiving the notification of registration of the NCTS customs declaration, the customs office of departure accepts within 15–30 minutes a decision on conducting customs control in accordance with the recommendations of the risk management system.

After completing the entire customs control process at the customs office of departure the goods will be released in accordance with the transit procedure, and the system will print an accompanying transit document. The accompanying document and the list of goods being transported must remain with the goods throughout the entire transit period.

Figure 1

Flowchart of the NCTS User Interaction Algorithm



Note. Adapted from CTC Traders API Phase 4 Service Guide (HM Revenue & Customs, n.d.).

Simultaneously with the printing of the accompanying transit document, NCTS sends a notification to the designated destination customs office. The message contains information taken from the customs declaration, allowing the destination customs office to inspect the consignment upon its actual arrival.

If the delivery of goods will pass through the customs authority of transit, NCTS also sends a notification about this to all transit customs authorities so that they can monitor their movement.

Upon arrival of the cargo at the transit customs office, the accompanying transit document must be presented to the relevant customs office. Its electronic original will be automatically retrieved in NCTS by entering the unique registration number, after which transit can proceed. Notification of arrival at the transit customs office will be sent to the customs office of departure.

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Customs office of destination having received prior notification about the cargo, will have all the information about the completed transit transactions and the ability to decide on the required form of control. After applying the required control measures, the destination customs authority; NCTS NCTS will notify the customs office of departure of the control results.

The activities of the customs authorities of the Republic of Uzbekistan have been introduced the E-Tranzit information system. Its development took into account the experience of developed countries and the specifics of national legislation. The E-Tranzit system consists of the following subsystems:

a subsystem for foreign trade participants, which provides submission of a pre-transit declaration prior to arrival at the customs border of the Republic of Uzbekistan(http://cargo.customs.uz);

a subsystem for customs officers to carry out customs procedures such as customs inspection, transport control, etc.;

subsystem for users of related ministries and agencies authorized to license and certify goods and permit their import into the territory of the Republic.

The transit declaration is submitted by the foreign trade participant to the customs authorities through the E-Tranzit information system. Data is entered in four stages, and the document is generated at the 5th stage.

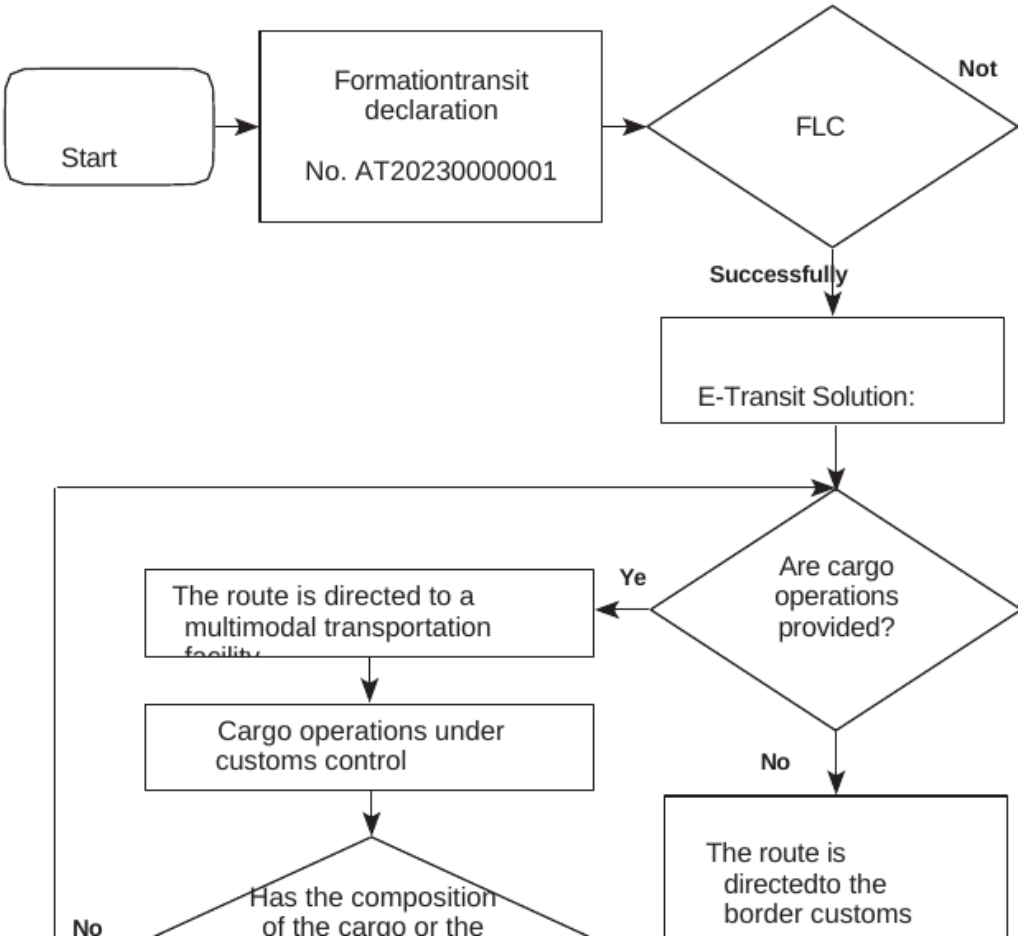
General information:
type of transport;
customs sender;
country where cargo transportation begins;
country where cargo transportation ends.
Transport information:
information about the carrier;
information about transport;
driver data.
Cargo information:
shipping documents for goods;
information about the product;
non-tariff measures to regulate foreign trade.
Warranty and fees:
guarantees;
fees.
Document formation:
in the form of an invoice;
in the form of a transit declaration.

The procedure for submitting a transit declaration by foreign trade participants through the E-Tranzit information system, approved by the decision of the State Customs Committee of the Republic of Uzbekistan and registered by the Ministry of Justice of the Republic of Uzbekistan on August 31, 2022 No. 3382.

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Figure 2

Flowchart of the Customs Transit Control Algorithm for Multimodal Transport Using the "E-Tranzit" Information System (Author's Design)



One of the features of the E-Tranzit information system is the ability to regulate multimodal transit transportation – control of transit transportation is for consolidated cargo destined for different recipients. The system allows for the registration of cargo operations such as unloading/reloading, change of transport mode, etc., which are carried out under customs control. Flowchart of the customs transit control algorithm for multimodal information transportation.The E-Tranzit system is shown in Fig. 2.

The proposed algorithm is included in the functionality of the E-Tranzit information system as a separate block called

"Cargo Operations." Trial operation of the new version of this system has shown that its new "Cargo Operations" block allows for the management of customs transit in multimodal shipments and creates favorable conditions for participants in foreign trade.

Conclusion

the early version of the "E-Tranzit" information system did not allow for the management of multimodal transport operations and required the submission of a new transit declaration after every cargo-handling operation. Studies on processing times conducted following the implementation of the new version of the "E-Tranzit" system confirm that it helps increase the throughput capacity of customs posts by a factor of 1.5 to 2.

At the same time, operational use of the "E-Tranzit" system highlights the need for further refinement, specifically regarding integration with risk management systems and the targeting of customs transit procedure of integration with the risk management system and the targeting of customs transit.

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