

Information Interaction of State Control Bodies in Checkpoints of the Russian Federation: Human Factor and Digitalization

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Abstract—The article analyzes the aspects of organizing information interaction in the process of implementing the functions of state control of authorized bodies at checkpoints of the Russian Federation. The authors systematize the directions of development of customs authorities in the context of the tasks set, the technologies used, and the possibilities for the development of human resources. The characteristic of the main “digital” goals in the framework of international customs cooperation is given. The analysis of the indicators of the “load” on the specialists of the regulatory bodies located at the checkpoints of the Russian Federation was carried out, a trend was determined for a significant intensification of the work efforts of each specialist. An expert assessment of the factors that reduce the efficiency of information interaction of authorized state regulatory bodies, contributing to the growth of claims from participants in foreign economic activity, is given. Sources of information interaction problems were identified, an expert assessment of the level of their influence on the result of “servicing” foreign trade participants was carried out. Proposals were made to improve the regulatory framework, establishing uniform requirements for the conduct of types of control by authorized bodies at checkpoints. The tasks of clarifying the functions of specialists who implement actual control at checkpoints have been identified. It is concluded that the strategy for the development of customs personnel should include the development of competencies of customs officers both in the field of digital compliance and in the field of related types of control to achieve greater efficiency. It was proposed to use PICARD international standards more widely in the process of training specialists for customs.

Keywords—*checkpoint, digitalization of customs, information interaction of state control bodies, human factor*

I. INTRODUCTION

Referring to the experience of development of the leading countries in the international market, it is easy to highlight the level of digitalization of their economies as a factor that directly ensures and contributes to the sustainability and competitiveness of the national economic and institutional environment [1].

In the Russian Federation, digital transformation is designated as a priority area for the country’s development [2], within which the sectors of the national economy should achieve “digital maturity” in the next strategic period.

Referring to the Russian practice of implementing the functions of state control (supervision) bodies (hereinafter referred to as the SC), it can be stated that the request for the use of the mechanism of a unified information system – the “system of interdepartmental electronic interaction” (hereinafter SIEI), which links the subjects of state control (hereinafter SSC) and with its further improvement will contribute to an increase in the level of security in the field of communications (including in the preparation of data, their storage, transfer, determination of access rights, etc.), decrease in the administrative costs of participants – objects of state control (hereinafter OSC), it is assumed that it (the mechanism) will form a new communication environment in which the process of control and supervisory activities will become even more “transparent”, unified and will fully comply with the principles of a risk-based approach widely used in international practice of control operations [3].

The strategic interests of the state in this case will be supported from the standpoint of the possibility of organizing control, on the one hand, selective, that is, it does not bear significant costs for its implementation, on the other, control with less risks, since the result is provided practically in a “contactless form”, which, in turn, neutralizes the threat of manifestation of the corruption component.

Analyzing [4-6], we note that now it is planned to further improve information systems in public administration (including intelligent platforms, Big Data, electronic registers, for example, registers are formed by types of control, by control measures (supervision), by conclusions on confirmation compliance with mandatory requirements for information systems (including pre-trial appeal)).

Even though there is a demand for the development of a unified information exchange system, the current state of the

development of IT platforms of control (supervision) bodies in the Russian Federation also shows a high level of interest in improving “own” functionally oriented intelligent technologies. This is due, first, to the specialization of the forms and types of control applied directly, as well as to the standards used within a particular department (ministry, industry).

In our work, it is supposed to focus on the study of certain aspects of information flow management, formed within the framework of the interaction between “subject of control 1” – “subject of control N”, included in the general process of state control, implemented at checkpoints (hereinafter – CP) of the Russian Federation. We need to identify existing problems in

organizing information interaction and propose directions for improving information exchange systems.

II. RESULTS AND DISCUSSION

Note that for customs structures, the current period (the last ten years) has become the time of an active transition to Digital Customs (the trend concept of the World Customs Organization).

Fig. 1 shows the characteristics of the evolution of the customs of the Russian Federation over the past thirty years, considering the applied communication tools and technologies [7].

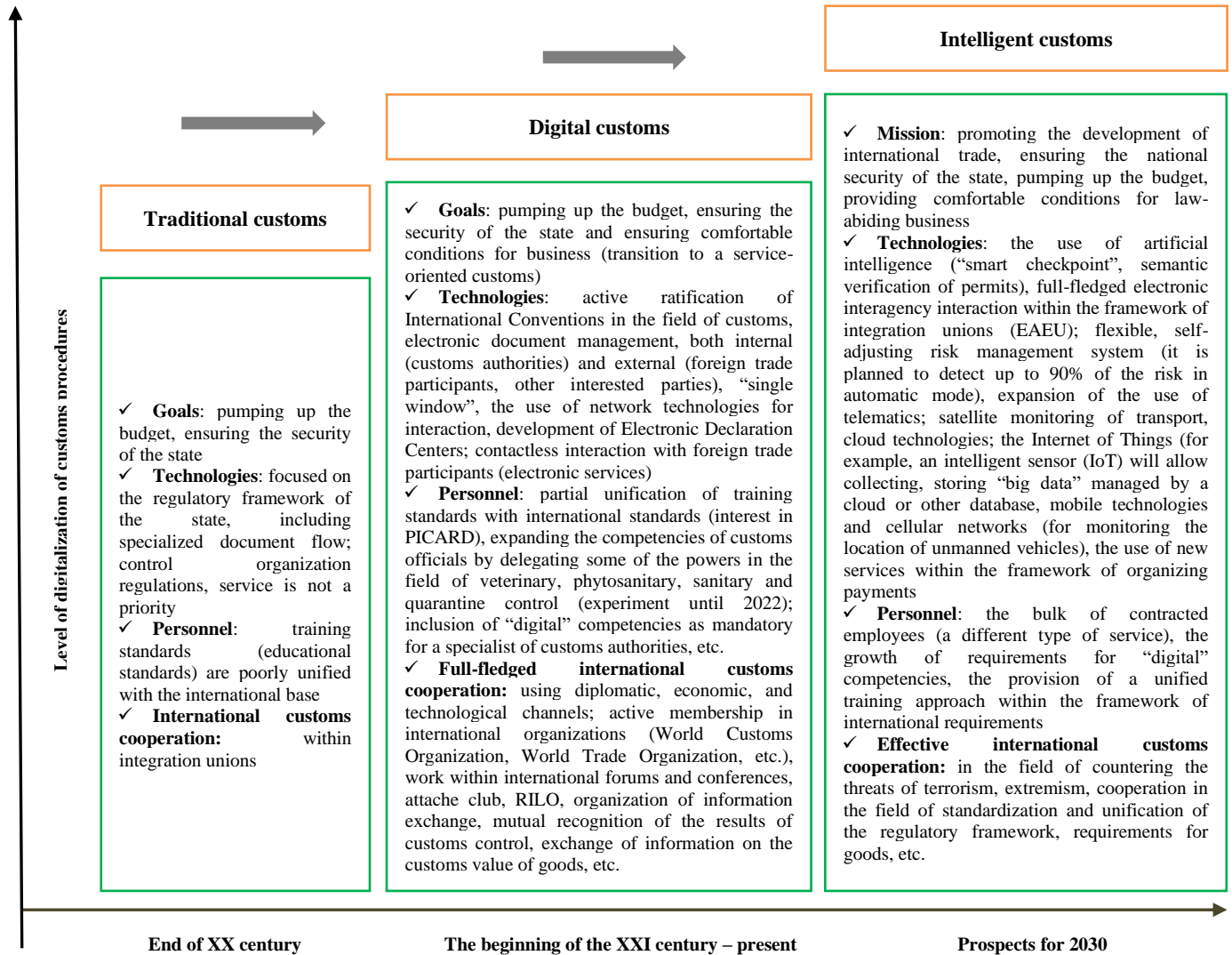


Fig 1. Development of the digital ecosystem of customs

Creation of centers for electronic declaration and electronic customs can be called the main results of the introduction of digital technologies for the period 2018-2020 for the Russian Federation [8].

In the scope of implementation of specialized software for the implementation of customs functions (in particular, state control) since 2014, the IT-system “IP Interaction” should be noted. It is this software environment that provides the ability to “link” the participating state control bodies in an on-line

format to receive and supply interested authorized persons with information about all documents that are required within the framework of the organization of customs control (for example, the AIST-M system, KPS “Statistical declaration” etc.).

Experts note that to ensure compliance with the requirements of the customs legislation of the Russian Federation, a fairly broad regulatory framework for cooperation with customs authorities of other states has been

formed, including regulatory aspects of information exchange, technologies for mutual recognition of the results of customs control, uniformity in the application of the risk management system, cooperation in the field suppression of offenses and crimes, etc. Now, a national system of traceability of goods with the use of identification means (including labeling) is developed.

Such global informatization has become a source of reforming the very structure of the customs authorities. So, in the modern regulatory field there are two types of customs – actual control and electronic. The structure of the customs of actual control includes customs posts located, among other things, at the CP. Since further we will analyze the interaction of regulatory bodies within the CP, we will turn to its brief description.

So, the CP is a classic element of the customs and logistics infrastructure, designed for the transition, transportation across the state border of the state of the OSC (persons, vehicles, cargo (goods) and animals). The checkpoint houses the controlling bodies authorized in accordance with the customs legislation to implement the SC (Fig. 2).

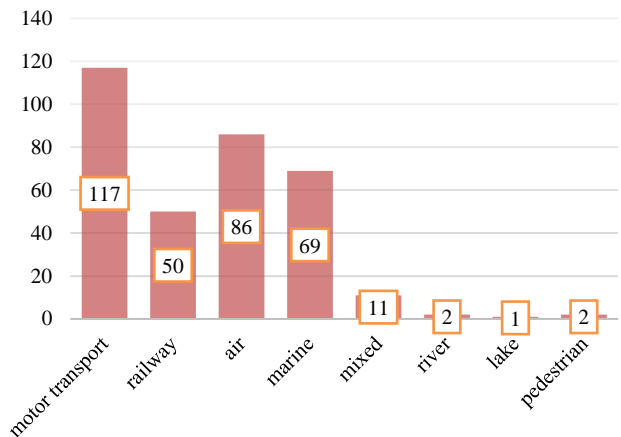


Fig. 2. Types and number of CP in the Russian Federation for January 1, 2020 [9]

Table I shows the indicators characterizing the flows of vehicles and the volumes of cargo, given per unit of the type of CP, in dynamics for the period of 2015-2019.

TABLE I. DYNAMICS OF THE SPECIFIC INTENSITY OF TRAFFIC FLOW AND FREIGHT TRAFFIC THROUGH THE CONVENTIONAL CHECKPOINT [9, 10]

CP type	Data on 01.01.2020				Compared to data on 01.01.2016, %			
	Average indicator of the number of vehicles entering the RF / conv. CP (1)	Average indicator of the number of vehicles leaving from the RF / conv. CP (2)	Average indicator of the volume of imported goods / conv. CP (3)	Average indicator of the volume of exported goods / conv. CP (4)	(1)	(2)	(3)	(4)
Automobile	0.1126	0.1115	167.58	226.92	140.26	140.307	131.21	179.08
Railway	0.0014	0.0014	926.92	3103.95	146.89	140.766	138.01	115.35
Air	0.0030	0.0030	5.40	3.41	128.89	129.208	↑ 12 times	↑ 60 times
Water (sea, river)	0.0008	0.0007	888.39	12428.81	123.07	123.138	121.98	116.39

The calculated data determine, on the one hand, the intensification of labor of representatives of customs authorities, on the other hand, the complication of information interaction between customs and representatives of other regulatory authorities due to an increase in the number of cases requiring a decision based on consulting, expert, and other procedures.

Based on the requirements of Russian legislation, border authorities (Federal Security Service), customs authorities (Federal Customs Service) operate in CPs, representatives of the Federal Service for Supervision of Consumer Rights Protection and Human Welfare (Rospotrebnadzor), Federal Service on veterinary and phytosanitary supervision (Rosselkhozadzor) operate in specialized CPs. Experts carry out control within the limits of the powers established by law. The organization of control in the CP should ensure the minimization of the time for conducting control operations; eliminate duplicate actions, reduce the number of interactions between officials of state control bodies with OSCs, vehicles, cargo, goods, and animals, including through a “single window” and a mechanism for preliminary information.

Technological maps of interdepartmental interaction [11] are used within the framework of the organization of SMEV of customs authorities with other authorized regulatory

authorities in terms of information exchange of documents (information) in electronic form are used to ensure the effectiveness of the “single window” technology (an information system that allows foreign trade participants to provide documentation on goods and vehicles for control to all authorized bodies once [9]).

In addition, the FCS conducts systematic work on the preparation of Agreements on information interaction (currently, more than 90 documents are presented on the website <https://customs.gov.ru/list>). Thus, the existing regulatory and legal framework, the practice of communication agreements, implemented by IT means, allows organizing information interaction in the software “subject of control 1” – “subject of control N” (Fig. 3).

The expert survey conducted in order to identify problems in information interaction, leading to a delay in the decision-making process (or to an incorrect decision) included customs representatives (3 experts, the level – heads of departments) and participants in foreign economic activity (3 experts, level – heads of small enterprises – exporters / importers). The survey showed that directly in the CP, the level of interaction with other state regulatory bodies is carried out in accordance with the regulations and there are no significant problems, however, there are still some “bottlenecks” (problem areas).

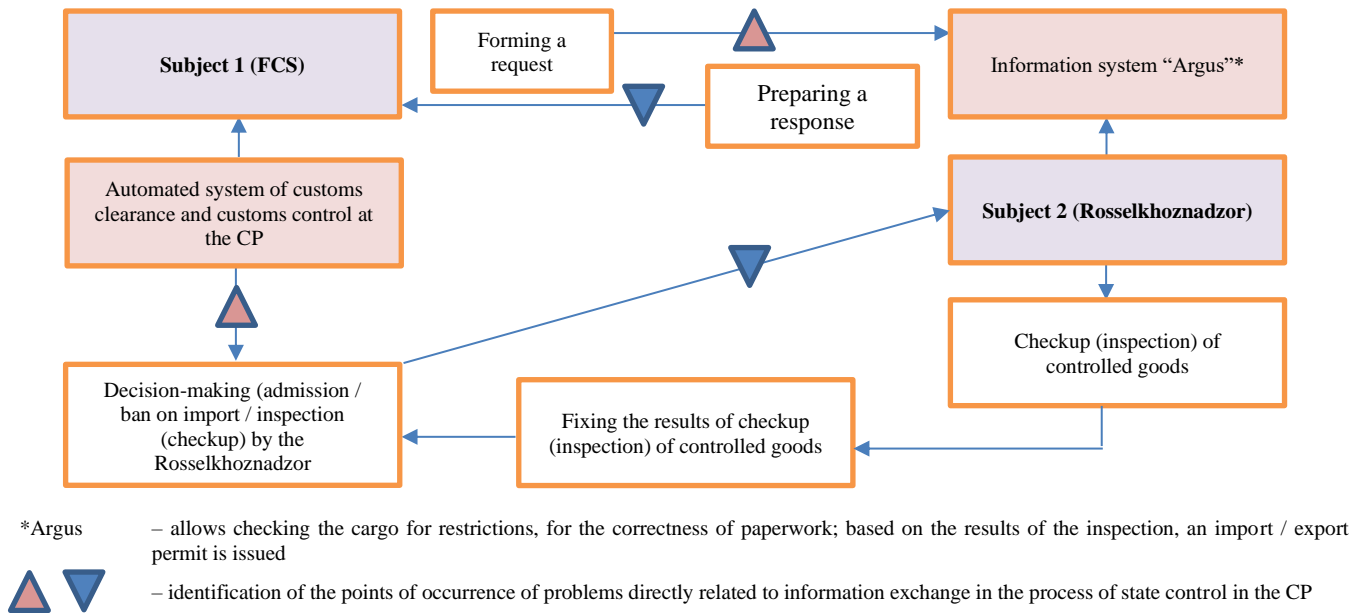


Fig 3. The process of information interaction of state control bodies in the CP when importing goods (for example, “FCS-Rosselkhoznadzor”)

Thus, the greatest “negative effect” from the point of view of the customs authorities’ assessment is possessed by the problems associated with the “human factor” – erroneously or incorrectly entered data into the request (both from the participants of foreign economic activity and the specialists of the customs authority); some customs specialists have a lack of knowledge in the professional field of veterinary control (this problem manifests itself especially clearly in the CPs participating in the experiment to transfer part of the powers from Rospotrebnadzor and Rosselkhoznadzor).

On the part of “co-executors” of control, experts from the customs name the formalism encountered in preparing responses as a barrier; there may be contradictions in decisions (the recommended solution – import is allowed, subsequently – indicate the illegality in the decisions of the customs authorities). This issue is also mentioned in [12].

According to the participants of foreign economic activity, there is a redundancy of requirements for the verification of documents by the customs authorities in the presence of “ready” documents in the system of the “co-executor”; technological problems are also noted – incomplete adaptation of the information system to resolve “private” problematic issues.

Also, according to the participants in foreign economic activity – in some cases (for example, a one-time significant number of foreign economic activity participants with controlled goods in the CP), the decision-making time can be delayed due to an obvious lack of human resources in the structures of “co-executors” (sometimes you have to wait for a veterinarian who performs his current duties at another workplace).

There are difficulties in using a “single window”: foreign economic activity participants note that the technologies used are not fully associated with international forms and standards

for presenting information in electronic form, which entails the problem of converting and reformatting files, and this process also “drags out” the time frame for execution control actions. The study of the opinions of practitioners representing the problems of information interaction in the field of organizing state control, and presented in [13], allows adding the noted inconsistency in the actions of state regulatory bodies in CP to the above problems and bottlenecks (sources here are the use of control technologies based on a different set of requirements and, accordingly, documents).

For importers, the problematic point remains the redundancy of requirements for the package of documents submitted to the customs in electronic form, and there are problems with the recognition of electronic documents originating from foreign persons.

The systematization of information interaction problems in software is presented in Fig. 4, experts set the level of severity of problems on a 5-point scale, where 5 is the maximum value. As we can see, the level of problems does not approach the maximum value, but the range of problematic aspects is quite wide and requires attention from both the direct executors of the functions of state control and from the leaders of this process. In general, on the basis of these problems, as well as the peculiarities of the practice of organizing state control in PP, we will formulate conclusions and proposals.

III. CONCLUSION

As a result of the study, the relevance of the development of information interaction of subjects of state control is indicated. It is necessary to use synchronization and ensure the effective integration of individual links in the information technology structures of control bodies to optimize the management of information flows.

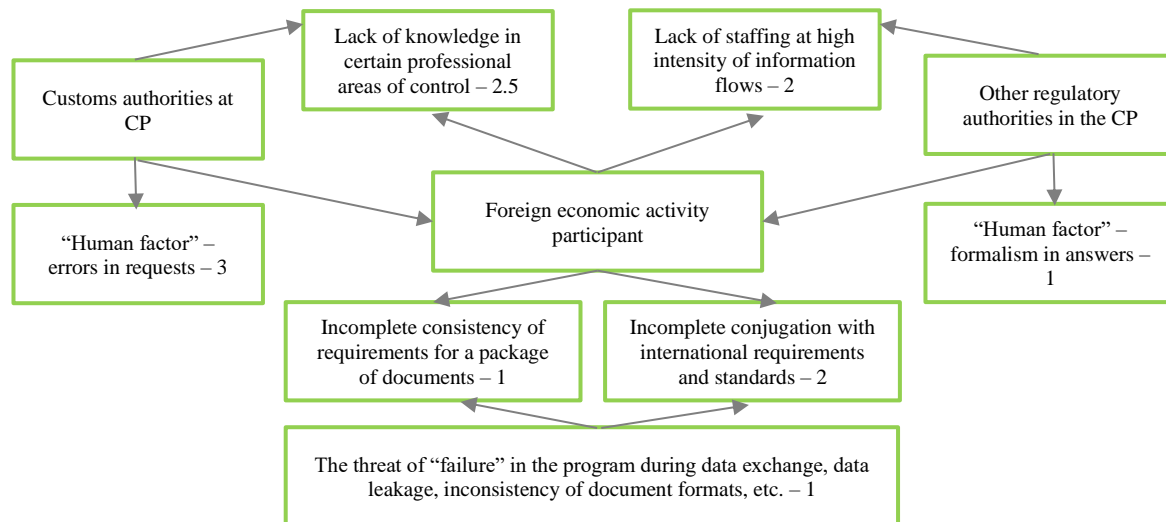


Fig. 4. The level of severity of the problems of information interaction of the Civil Code bodies in the CP

A theoretical analysis of the concepts for the development of bodies included in the system of state control showed the inevitability of a transition over the next ten years to the inclusion of artificial intelligence in this process. At the same time, sustainable growth of digital competencies of the subjects of actual and documentary control must be ensured.

The acting subjects of state control of the Russian Federation in the CP are currently at a sufficiently high level provided with communication facilities and IT platforms. The use of technologies of electronic declaration, “single window”, mechanisms of preliminary information, etc. is highly appreciated.

However, when performing the functions of state control, for example, when carrying out state control during the export of goods subject to veterinary, phytosanitary or sanitary and quarantine control, some “bottlenecks” are revealed. The sources of the main problems of information interaction are the following: inclusion of the “human” factor (accumulation of errors due to the intensification of control operations (here physiological and psychological fatigue; the requirement to maintain a high rate of work performance; subjectivity in preparing and making decisions)); incomplete consistency in the requirements for the forms (formats) of permits; risks of failure in software resources.

To overcome these problems, it is proposed to adopt normative acts to establish unified requirements for the composition, types and forms of information provided for state control. With the successful completion of the experiment in the CP on transferring the functions of other regulatory bodies (Rosselkhoznadzor, Rospotrebnadzor) to the customs authorities, it will be necessary to clarify the functions of both customs specialists at the CP and other state regulatory bodies to exclude both duplication of actions and potential “gaps” (lack of reaction on the problematic situation on the part of all regulatory authorities).

In addition, it is proposed to strengthen the strategy of personnel growth in the customs authorities, relying on the international PICARD standards, including expanding the digital competence of specialists and creating a new profile of

knowledge – in the related areas of veterinary, phytosanitary, sanitary and quarantine control [14].

In general, the proposals presented do not exhaust this study due to the need for further analysis of the problems of information interaction with state control bodies of the “second” party, for example, when organizing export supplies from the Russian Federation abroad.

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