World Bulletin of Management and Law (WBML)
Available Online at: https://www.scholarexpress.net
Volume-54, January 2026
ISSN: 2749-3601

INNOVATIVE IT SOLUTIONS FOR ENHANCING TRANSPARENCY IN CUSTOMS AUTHORITIES: INTERNATIONAL EXPERIENCE

Yoqubov Jamshidbek Kamoliddin o`g`li
Master's Degree Student of the Customs Institute

Article history:

Received: 28th October 2025
Accepted: 24th November 2025

Abstract:

The article examines foreign models of applying information technologies in the anti-corruption activities of customs authorities in the context of the digital transformation of public administration. The main areas of the use of digital and information and communication technologies in the activities of customs administrations of various countries are analyzed, aimed at preventing, detecting, and minimizing corrupt practices.

The study explores such tools as electronic declaration systems and electronic document management, automated risk management systems, analytical platforms for big data processing, technologies of interagency information interaction, as well as elements of artificial intelligence and automation of control procedures.

Special attention is paid to issues of increasing the transparency of customs operations, reducing the influence of the human factor, and strengthening institutional control. Based on a generalization of foreign experience, conclusions are drawn regarding the significance of information technologies in the formation of an effective anti-corruption framework and the possibilities for adapting the examined models in the practical activities of customs authorities.

Keywords: Information technologies, digital technologies, anti-corruption activities, counteraction to corruption, customs authorities, customs administration, foreign experience, international practice, digitalization of public administration, electronic declaration, electronic document management, automated risk management systems, big data analysis, interagency information interaction, transparency of customs procedures, minimization of corruption risks.

Corruption today is one of the major problems of the global economy. The annual volume of bribes worldwide amounts to USD 1.6 trillion, while the global economy additionally loses USD 2.6 trillion due to corruption-related crimes, which account for 2.7% of global GDP [1].

Corruption often stands in the way of achieving the objectives of customs authorities, actively jeopardizing revenue collection, trade facilitation, and the protection of internal security, including the prevention of illicit trafficking in goods such as weapons and narcotics. Customs duties constitute a significant share of public revenues, typically ranging from 30% to 50% of total tax receipts; however, due to corruption within customs authorities, 30% or more of customs revenues are lost [2].

Corruption as a phenomenon and as a social evil should be examined from economic, legal, sociological, political, and even psychological perspectives.

There are few public institutions in which the prerequisites for corruption are as evident as in customs administrations [3]. Corruption easily materializes in environments where officials possess discretionary decision-making powers and where risk-based control systems are absent or can be easily circumvented. High customs duties and complex customs procedures incentivize participants in foreign economic activity to reduce customs payments and accelerate transactions through bribery of customs officials, including by under-declaring or failing to declare goods [4].

Drug and arms trafficking, as well as large-scale smuggling of alcohol and cigarettes, place the customs authorities of any country directly within the sphere of organized crime [6].

Under such conditions, customs officials may have strong incentives to accept bribes in the performance of their duties. Another important characteristic is that relations between customs

World Bulletin of Management and Law (WBML)
Available Online at: https://www.scholarexpress.net
Volume-54, January 2026
ISSN: 2749-3601

authorities and participants in foreign economic activity are often mediated through third parties (customs brokers and logistics operators). Over time, these intermediaries may establish close relationships with customs officials and use them to facilitate the solicitation or payment of bribes [7].

Even with the use of modern customs control procedures, it is impossible to completely eliminate direct contact between customs officials and representatives of goods owners during the physical inspection of goods. The risk of bribery increases when customs formalities are carried out in small offices during night shifts and on weekends.

Since customs authorities operate at geographically dispersed and remote posts with relatively small staffing levels, effective supervision of both customs units and individual officials is difficult to ensure. As a result, extensive corruption networks may emerge, encompassing various subdivisions of customs authorities [8].

Cases of interference by the political leadership of a country in the activities of customs authorities are not uncommon [9]. For example, a recent study conducted in Tunisia revealed that companies owned by the then-President and his family evaded customs duties, thereby gaining significant competitive advantages [10].

In addition, the practice of appointing officials to key strategic positions in customs authorities on the basis of political affiliation or loyalty cannot be overlooked. In April 2015, a corruption scandal involving the customs authorities led to the resignation and arrest of the then-President of Guatemala, Otto Pérez Molina.

Nepotism should also not be underestimated. Relatives of customs officials often believe that an individual holding a position of power is obliged to use that influence to assist family members and compatriots. Helping and sharing is perceived by some individuals as a social obligation [11].

In such cases, family members and social networks view customs officials as important potential patrons with access to money, resources, and opportunities, which they are morally expected to share. Accumulation of wealth, even through corrupt means, is not necessarily perceived as inherently wrong; rather, accumulation without redistribution is considered unethical, a view characteristic of certain social groups [12]

Moreover, it is often in the personal interest of a customs official to assist others, as he or she may require similar assistance in the future.

In 1988, the American economist Robert Klitgaard summarized the factors stimulating corruption in the well-known "corruption formula":

Corruption = (Monopoly + Discretion) – Accountability.

In his research, he demonstrated the destructive consequences of corruption and showed how bribery, extortion, fraud, kickbacks, and collusion lead to economic underdevelopment, unchecked influence of oligarchs, and political instability [13].

The above corruption formula illustrates and enables an analysis of the degree of influence of various factors on the process of corruption prevention and counteraction, particularly in the search for effective tools in anti-corruption efforts. In the legal systems of all countries, corruption constitutes a criminal offense. One of the earliest laws providing for criminal liability for bribery and abuse of office was the Criminal Code of 1903 [14].

International recognition of the fight against corruption can be traced back to 1975, when a new stage in the development of the global economy began, accompanied by the rapid growth of transnational corporations. In 1975, the Resolution against Corruption was adopted, calling upon governments of all countries to take the necessary measures to prevent and combat corruption.

The United Nations Convention against Corruption has served as the foundation for most national anti-corruption legislation worldwide and has been ratified by 186 countries. This instrument is not legally binding in the sense that a country is not subject to sanctions for non-compliance and is not formally obliged to adhere to it. Nevertheless, the UNCAC establishes common standards of conduct and governance that assist states in combating corruption.

The Revised Arusha Declaration provides a framework for combating corruption in customs authorities and enhancing the integrity of customs officials in the member states of the World Customs Organization (hereinafter – WCO). There are only minor differences between the WCO Arusha Declaration and the recommendations of other international organizations, such as the International Monetary Fund document "Practical Measures to Promote Integrity in Customs Administrations" and the Organisation for Economic Co-operation and Development (2017) report "Integrity in Customs:

World Bulletin of Management and Law (WBML)
Available Online at: https://www.scholarexpress.net
Volume-54, January 2026
ISSN: 2749-3601

Taking Stock of Good Practices".

All of these documents emphasize that there is no quick solution to the problem of corruption in customs authorities and that a comprehensive approach is required. It is essential to strike a balance between the facilitation of customs procedures and the maintenance of adequate control, taking into account local conditions and sector-specific risks. Relevant technical anti-corruption measures in customs administrations include:

measures aimed at implementing risk-based customs control [15];

the establishment of effective internal audit units;

the use of automated, digitized revenue management systems;

continuous monitoring of the effectiveness of relevant tools, procedures, and control mechanisms.

The global community did not immediately recognize the importance of combating corruption; therefore, international anti-corruption standards have evolved gradually, shaped by numerous corruption scandals and a growing understanding of the need to criminalize corrupt practices.

Transparency International assesses corruption by calculating the annual Corruption Perceptions Index (CPI) and ranks countries and territories according to perceived levels of corruption in the public sector. The CPI is the most widely recognized global indicator of corruption. The index measures corruption exclusively in the public sector, highlighting one of the main drivers of corruption: insufficient oversight of political party financing, reduced transparency in public administration, and shortcomings in public service delivery. The CPI is based on 13 surveys conducted by relevant institutions, including surveys carried out by the World Bank and the International Monetary Fund [16].

Such studies serve as tools for both governments and the professional community, as their results make it possible to assess the effectiveness of anti-corruption efforts and the instruments employed at the national level.

The world of information technologies represents not only a new stage in the technological development of humanity but also a new legal and socio-political reality. Digitalization has become a key factor in the economy of any country and a defining trend in contemporary economic development. The rapid advancement of IT technologies leads not only to positive changes but also to increased risks for citizens, businesses, legal systems, and state security.

The World Bank has assessed the challenges faced by governments in combating corruption. A World Bank research report emphasizes that, as a result of the global COVID-19 pandemic, billions of dollars have been borrowed and spent by countries to manage the pandemic outside standard accountability procedures, thereby increasing corruption risks. To mitigate these risks, governments must clearly define their actions, enforce rules, address violations, and resolve transparency issues as swiftly as possible. Instruments of financial transparency, citizen engagement, and social accountability are becoming increasingly important [17].

Today, governments in many countries place high expectations on IT technologies that reduce the human factor in the provision of public services, as this contributes to greater transparency in government activities and public service as a whole.

The use of IT technologies helps to create direct and more transparent channels of communication between public officials, citizens, and businesses, fosters a negative public attitude toward corruption, increases trust in government, and offers new tools for enhancing the transparency of governmental activities and preventing corruption.

The primary objective of implementing IT technologies is to automate outdated "paper-based" operations used in interactions with citizens and businesses. This is intended to make public services open, accessible, and convenient for both citizens and the business community.

International practice already offers a range of digital solutions whose application contributes to ensuring transparency, openness of public administration, and equal access of the population to public services.

Globally, the level of e-government development has been assessed since 2003 by the United Nations Department of Economic and Social Affairs (hereinafter – UN DESA) through the E-Government Development Index (EGDI), which is calculated every two years. The EGDI is a composite indicator combining three sub-indices—online services, human capital, and telecommunications infrastructure—and is used to measure governments' readiness to apply IT technologies, including for providing high-quality information and public services

World Bulletin of Management and Law (WBML)
Available Online at: https://www.scholarexpress.net
Volume-54, January 2026
ISSN: 2749-3601

to citizens and businesses [18].

In addition to the EGDI, the E-Participation Index (EPI) is used. It is based on three components—e-information, e-consultation, and e-decision-making—and serves to assess the provision of interactive information services to citizens. As of 2020, the top positions in the EGDI ranking among 193 countries, taking into account the scope and quality of online services, the state of telecommunications infrastructure, and existing human capital, were held by Denmark, the Republic of Korea, and Estonia, followed by Finland, Australia, Sweden, the United Kingdom, New Zealand, the United States of America, the Netherlands, Iceland, Singapore, Norway, and Japan.

Among least developed countries, Bhutan, Bangladesh, and Cambodia became leaders in digital government development, moving from the middle to the high EGDI group in 2020. In Africa, the highest-ranking countries are Mauritius, Seychelles, and the Republic of South Africa. Overall, 65% of countries are classified as having a high or very high EGDI level [19].

Latin American countries are characterized by excessively bureaucratic public service delivery processes and a high level of corruption. According to Transparency International, in 2017, 30% of Latin Americans paid bribes to access public services, representing nearly 30 million people in the region. These figures prompted the search for new solutions, which are already having a positive impact on this issue.

For example, Mexico, Peru, Brazil, and Argentina have joined efforts to improve public access to high-quality public services. These countries have introduced integrated portals for a range of public services, enabling citizens to register for certain services online. However, the speed of online service delivery remains limited. The process is hindered by the fact that not all public servants and government officials are prepared for such changes: some fear job losses, while others fear losing a systematic source of illegal income derived from the provision of public services.

It should be noted that on 1 January 2019, a Presidential Decree entered into force in Argentina introducing so-called e-government, or "paperless government." The decree was implemented gradually, and public institutions were given one year to complete training and transfer a number of procedures to an online format. For this purpose, the government trained 227,900 users of the new system. Portugal has demonstrated successful experience in implementing e-government through the Simplex program [20].

The country uses this tool to modernize public service delivery, increase openness, and facilitate interaction between legal entities and individuals in accessing public services. Experts acknowledge that the success of this program is based on its continuous improvement through discussions with the public and relevant organizations. The program's website includes a public feedback window for proposals, recommendations, and comments, enabling every individual to be heard.

This approach places citizens at the center of public services, fosters their understanding that their voices matter, and gradually transforms the mindset of public servants. A similar approach to reducing bureaucratic barriers in public service delivery has been implemented in Brazil since 2017 through the "Simplifique!" program [21].

Successful practices of improving public service delivery through digitalization have also been implemented in the United Kingdom, France, Canada, and Israel [22].

The list of successful cases from countries that have recently embarked on the automation of public services could be extended further. These solutions vary in terms of implementation timelines, population size and characteristics, political and economic contexts, and levels of IT development. Successful implementation of such solutions contributes to changes in the mindset of both citizens and public officials.

Open data initiatives enhance the transparency of government activities by disclosing information on public procurement, land ownership, education and healthcare, crime statistics, financial reports of governmental institutions and the state, government contracts, international procurement, and other areas.

At the international level, the implementation of open data by governments is guided by the International Open Data Charter. Among anti-corruption tools, the activities of the non-governmental organization Transparency International play a significant role, particularly through the maintenance of registries of non-compliant participants in public procurement.

The most significant positive effects from the implementation of IT technologies have been

World Bulletin of Management and Law (WBML)
Available Online at: https://www.scholarexpress.net
Volume-54, January 2026
ISSN: 2749-3601

observed in the United Kingdom, Canada, France, and the United States. Sweden, Denmark, the Republic of Korea, and Japan are also among the top ten countries. According to Transparency International, these countries are characterized by both a high level of IT development and a strong Corruption Perceptions Index score.

Mexico has expanded the scope and depth of open budget data through its advanced financial transparency portal, which includes public procurement and infrastructure investment data. Mexico City became the first city to publish its procurement data in an open format.

Open data ensure transparency of public administration and thereby contribute to reducing corruption risks, promoting business development and participation in public procurement, and ultimately increasing competition in goods and services markets.

Blockchain technologies may also be used as tools to combat corruption, as they expand public access to government services and help address social challenges. This research was conducted within the framework of the BLOCKCHANGE project [23].

The project examined the impact of blockchain technologies on the social sphere in three areas: human resources, logistics, contract conclusion, and public services [24].

In 2018, the National Research Council of Canada (NRC) launched a pilot project using a new Ethereum-based blockchain for open administration of public procurement.

In India, blockchain technology has been used to develop a land ownership tracking system by integrating IT solutions with land registries. In Switzerland, these technologies are applied to access public services. In the United States, blockchain technologies are used in electronic voting during elections.

All of the processes described above are closely linked to the collection and transmission of personal data. Consequently, alongside their advantages, challenges may arise related to personal data breaches, cybercrime, and fraud.

Anti-corruption infrastructure exists in every country; however, its structure, methods of operation, liability for corruption-related offenses, and the influence of public authorities vary across jurisdictions. These differences depend on the level of corruption in a country, public perception of corruption, the political will of senior state leadership, and the degree of digitalization of public administration processes.

For example, in Denmark, which has a relatively low level of corruption and a high Corruption Perceptions Index score, no specialized anti-corruption body has been established; however, criminal liability for corruption-related offenses is предусмотрена by law.

A similar example is Finland, which also consistently ranks among the top countries in global anti-corruption ratings. This country likewise lacks a developed anti-corruption infrastructure. Germany, France, and Italy, by contrast, have more advanced anti-corruption frameworks; due to their historical circumstances (including the development of organized crime groups and extensive international business activities), these countries were compelled at certain stages to adopt more stringent measures and strengthen their anti-corruption institutions.

The core principles underlying anti-corruption efforts include:

– transparency in the activities of public authorities;

– transparency in the financing of political activities;

– civic engagement and public participation.

Naturally, countries that are leaders in the development of IT technologies have long implemented e-government systems, electronic registries, and e-justice mechanisms, the effectiveness of which has been demonstrated in practice.

Through official websites and social media platforms, anti-corruption bodies conduct public awareness campaigns and provide online training for public servants. As a result, IT technologies are becoming a key ally in the fight against corruption, enabling anti-corruption professionals to detect, prevent, and even predict corrupt practices.

At the same time, when implementing such technologies, it is necessary to take into account the specific characteristics of each country, as well as factors that directly or indirectly affect the effectiveness of IT-based anti-corruption measures.

Among the IT technologies that contribute to combating corruption, including within customs authorities, the following can be highlighted:

a) the establishment of e-government systems and the development of a "single window" system in the conduct of customs control;

b) the provision of digital public services

World Bulletin of Management and Law (WBML)
Available Online at: https://www.scholarexpress.net
Volume-54, January 2026
ISSN: 2749-3601

(including customs services) using IT technologies that minimize direct personal contact between citizens, participants in foreign economic activity, and officials of supervisory authorities;

c) the creation of tools aimed at eliminating corruption, including electronic declaration, electronic public procurement, and electronic reporting;

d) the use of social media platforms to identify cases of corruption in the public sector;

e) the use of the Internet to ensure free access to public information and the ability to obtain relevant information about the activities of public authorities through open-access platforms, electronic mail, and other digital channels.

REFERENCES

1. Halai A., Halai V., Hrechaniuk R., Datsko K. Digital Anti-Corruption Tools and Their Implementation in Various Legal Systems Around the World // SHS Web of Conferences ISCSAI 2021. P. 1–7.
2. Chalendard C. Using internal and external sources of information to reduce customs evasion // ICTD Working Paper. 2017. N 62 (January). 59 pp.
3. Ferreira C., Engelschalk M., Mayville W. The challenge of combating corruption in customs administrations. Chapter 11 // The Many Faces of Corruption. Washington D.C.: The World Bank. 2007. P. 367–386.
4. Ardigo I.A. Corruption in tax and customs authorities. Anti-Corruption Helpdesk // Transparency Interna- tional. URL: https://www.transparency.org/files/content/ corruptionqas/Literature Review of Corruption risks in Customs and Tax 2014.pdf
5. Campos J.E., Pradhan S. The Many Faces of Corruption: Tracking Vulnerabilities at the Sector Level // Washington D.C.: The World Bank. URL: https:// openknowledge.worldbank.org/bitstream/handle/10986 /6848/399850REPLACEM101OF
6. McLinden G. Integrity in customs. Chapter 4 // Customs Modernization Handbook. Washington DC: World Bank. 2005. P. 67–89.
7. Hors I. Fighting corruption in customs administration: What can we learn from recent experiences? // OECD Development Centre Working Paper. 2001. N 175 (April). 48 pp.
8. 8. Jackson D., Kobis N. Anti-corruption through a social norms lens // U4 Anti-Corruption Resource Centre.2018. Iss. 7. 24 pp.
9. Von Soest C. How does neopatrimonialism affect the African state's revenues? The case of tax collection in Zambia // The Journal of Modern African Studies. 2017. N 45(4). P. 621–645.
10. Rijkers B. Improving customs performance: Lessons from 5 years of reform in Madagascar // Washington D.C.: World Bank. 2018. 24 pp.
11. Zuleta J.C., Leyton A., Ivanovic E.F. Combating corruption in revenue administration. The case of VAT refunds in Bolivia. Chapter 10 // The Many Faces of Corruption. Washington D.C.: The World Bank. 2007. P. 339–366.
12. Mddard J.-F. Corruption in the neo-patrimonial states of Sub-Saharan Africa. Chapter 22 // Political Corruption. Concepts and Contexts. Third edition. New Brunswick: Transaction Publishers. 2002. P. 126–147.
13. Klitgaard R. Controlling Corruption. University of California Press, Berkeley. 1991. 230 pp.
14. Афонин Д.Н. Борьба с коррупцией в Российской Империи в начале XX века // Бюллетень инновационных технологий. 2019. Т. 3, № 1(9). С. 5–8. EDN VTLUST.
15. Афонин Д.Н., Афонин П.Н. Система управления таможенными рисками: состояние и перспективы // Russian Journal of Management. 2019. Т. 7. № 4. С. 96–100. DOI 10.29039/2409-6024-2019-7-4-96-100. EDN BKOSTQ.
16. Скляр Е.М., Пономарев А.В. Контроль за исполнением международно-правовых обязательств государств в сфере противодействия коррупции: проблемы корректности Индекса восприятия коррупции // Modern Science. 2022. № 6–1. С. 243–247. EDN ZAKUPK.
17. Kijang S., Dato Onn J., Lumpur K. Enhancing Government Effectiveness and Transparency The Fight Against Corruption. International Bank for Reconstruction and Development, Malaysia. 2020. 386 pp.
18. Азоева О.В., Нурашева К.К., Шим Г.А. Индекс разви- тия электронного правительства (EGDI) и его связь с уровнем экономического развития в странах ЕАЭС // Вестник университета. 2022. № 4. С. 5–12. DOI

World Bulletin of Management and Law (WBML)
Available Online at: https://www.scholarexpress.net
Volume-54, January 2026
ISSN: 2749-3601

10.26425/1816-4277-2022-4-5-12. EDN VAVVDP.
19. United Nations E-Government Survey 2022. United Nations, New York, 2022. URL: https://ifap.ru/library/ book652.pdf
20. Simplex. Official site. URL: https://www.simplex.gov.pt/ livro
21. Simplifique. Official site. URL: http://www.simplifique. gov.br/E-govtech summit 2020. Official site. URL: https://www. govtechsummit.eu/agenda
22. Blockchain for social change. Official site of the project. URL: https://blockchan.ge/
23. Лавелина В.С. Технология блокчейн против корруп- ции в государственном секторе: правовой анализ // Современная наука: актуальные проблемы теории и практики. Серия: Экономика и право. 2022. № 9. С. 130–134. DOI 10.37882/2223-2974.2022.09.15. EDN DBNPEI.