Europe at a Crossroads: Governance, Business, and Policy Transformation in a Changing Global Economy. Proceedings of the International Conference EU-PAIR 2026

DOI:10.47743/eu-pair.2026-1-2

THE INSTITUTIONAL TRANSFORMATION OF EU CUSTOMS GOVERNANCE: DEEPENING EUROPEAN INTEGRATION

THEMIS ANTHRAKIDIS
University of Macedonia and Evzoni Customs Office
Independent Authority for Public Revenue (IAPR)
Greece
t.anthrakidis@uom.edu.gr

NIKOS ASTROULAKIS
Hellenic Mediterranean University
Tax and Customs Academy
Independent Authority for Public Revenue (IAPR)
Greece
n.astroulakis@aade.gr

Abstract
This paper examines the current transformation of the EU Customs Union. It argues that it is an institutional transformation rather than simply a program of technological modernization, asking how, and to what extent, the emerging transformation architecture reconfigures EU customs governance. Also, what this reconfiguration reveals about the deepening of European integration. Drawing on qualitative institutional analysis of the 2026 compromise and Council first reading text, the Commission proposal, the Union Customs Code, institutional reports and relevant scholarship, the paper develops an eight-dimensional framework for comparing traditional customs governance with data driven customs governance. The analysis identifies a shift from declaration and border centered control towards more continuous supervision of operators and supply chains through shared data. The paper's principal contribution is to show how this shift institutionally transforms customs governance and deepens European integration within the domain of customs administration. Our findings highlight functional centralization, combining stronger EU-level information and coordination capacities with the continued national exercise of coercive enforcement.
Keywords: *customs governance; data driven customs governance; EU customs data hub; European integration; institutional transformation.*
JEL Classification: F15; H83; F13; O33.

1. INTRODUCTION

Customs administration at the external borders of the European Union has become an increasingly complex field in which trade facilitation, revenue protection, border security and regulatory enforcement intersect. Customs authorities no longer deal only with duties, tariff classification, valuation and origin. They also contribute to the enforcement of rules concerning product safety, public health, environmental protection, sanctions, intellectual property, market surveillance and supply chain security. Customs is therefore a fiscal administration, a trade authority and a front-line regulatory institution at the same time (European Commission, 2023a; Schippers, 2023).

The scale and speed of cross border trade have made this multifunctional role more difficult. In 2024, 2,140 customs offices in the Union handled the import, export and transit of more than 1.37 billion items and collected almost EUR 27 billion in customs duties. During the same year, they detected 64,000 cases of goods posing health risks and detained 112 million counterfeit items (Council of the European Union, 2026a). E-commerce has intensified the pressure by multiplying low value consignments and dispersing responsibility across platforms, vendors, carriers and consumers. Geopolitical shocks, supply chain disruptions and the growing number of non customs rules enforced at the border have simultaneously raised expectations of customs as an instrument of economic security.

The existing institutional settlement is marked by a basic asymmetry. The customs union and common commercial policy are Union competences, and customs rules are principally set through directly applicable EU law. Yet implementation, control and enforcement are performed mainly by 27 national customs administrations operating through different organizational structures, administrative capacities and information systems. This arrangement has enabled a common customs territory without a single European customs administration, but it has also produced differences in practice and weak points in the collective management of financial and non financial risks (European Court of Auditors, 2021; Walsh, 2022).

In May 2023, the Commission proposed a new Union Customs Code, an EU Customs Data Hub and a European Union Customs Authority (European Commission, 2023a, 2023b). The co legislators reached political agreement on 26 March 2026 and confirmed the final compromise text in April 2026 (Council of the European Union, 2026a, 2026b). The Council first reading text was issued on 24 August 2026, and the Council formally adopted its first reading position on 3 September 2026 (Council of the European Union, 2026c; European Commission, 2026b). The Commission communicated its support for that position on 4 September 2026. The ordinary legislative procedure nevertheless remains ongoing, and the new Regulation has not yet been published in the Official Journal (European Commission, 2026b). This legal status is important

because the paper analyses the agreed transformation architecture at an advanced legislative stage rather than an already applicable administrative system.

The literature provides valuable doctrinal and operational accounts of the proposed legal framework, its e-commerce regime, digital systems and implications for customs practice (Chen, 2023; Pickett and Wolffgang, 2023; Schippers, 2023; Izdebski, 2024; Antov et al., 2026). It also documents the long-standing difficulty of achieving uniform implementation through nationally organized administrations and the role of integrated risk and compliance management in modern customs (Walsh, 2022; Erkoreka and Blas, 2023; Widdowson, 2020). Research on the European administrative space explains how integration can proceed through networks, agencies and shared instruments without replacing national bodies (Hofmann, 2008; Heidbreder, 2011; Busuioc, 2009). These literatures have seldom been brought together to examine the current customs transformation as a reallocation of institutional capacities and relationships. The gap is therefore not whether the transformation is digital, but what its digital and organizational instruments do to the locus, timing and object of customs authority.

The research question is therefore: how and to what extent does the current transformation reconfigure EU customs governance, and what does this reconfiguration reveal about the deepening of European integration? In this paper, EU customs governance refers to the system of formal rules, organizational arrangements, administrative practices and relationships through which EU institutions, national customs administrations and economic operators implement customs legislation, exchange information, manage risks and exercise customs supervision across the Union's external borders.

Institutional transformation of EU customs governance refers to a sustained reconfiguration of the rules, organizational structures, administrative capacities, information infrastructures and relationships through which customs supervision is organized and exercised. It extends beyond technological modernization because it affects the allocation of responsibilities, mechanisms of coordination, objects and timing of supervision, and the relationship between public authorities and economic operators. In this paper, we use deeper European integration to refer specifically to stronger EU-level administrative capacity, common information infrastructures, coordinated risk management, and shared supervisory practices.

Our central argument is that the reform amounts to an institutional transformation because it changes how customs authority is organized, without creating a single European customs administration. In this context, information is more centralized, and analytical and coordinating capacity at the Union level is stronger. Also, supervision increasingly follows operators and supply chains over time rather than treating each declaration as a largely self-contained event. National administrations nevertheless retain the core coercive and territorial

functions of customs enforcement. The result is a hybrid system of multilevel customs governance. The paper develops this argument through an eight-dimensional institutional framework that compares Traditional customs governance with data driven customs governance across the object, temporal reach, spatial organization, information architecture, control logic, allocation of authority, trader relationship and safeguards of supervision. This framework is the paper's main analytical contribution because it shows not only that customs governance is becoming more data driven, but also where institutional authority and administrative practice are being reconfigured.

Methodologically, the paper combines qualitative institutional analysis with structured document analysis. Its primary legal corpus comprises the April 2026 final compromise (ST 7771/26 ADD 1 and COR 1) and the August 2026 Council first reading text (ST 8190/26), which is treated as controlling where its wording differs from the 2023 proposal (Council of the European Union, 2026b, 2026c). The March political agreement, the Council's adoption of its first reading position and the subsequent Commission communication establish the political and procedural context (Council of the European Union, 2026a; European Commission, 2026b). COM(2023) 258 and COM(2023) 257 are used to trace the reform's institutional genealogy, while Regulation (EU) No 952/2013 provides the baseline. Institutional reports, international standards and specialized scholarship provide contextual and analytical triangulation. The analytical categories were developed deductively from three bodies of scholarship: customs modernization and compliance management, European multilevel administration, and data driven public administration. They were then refined through structured comparison with the legal corpus. A dimension was retained when it captured a distinct aspect of how supervision is organized and when the reform texts indicated a meaningful change from Traditional customs governance. The documents are therefore coded across the object, temporal reach, spatial organization, information architecture, control logic, allocation of authority, trader relationship and safeguards of supervision. Because implementation has not yet begun, the analysis is prospective and does not claim to measure operational effects.

The paper structure has as follows. Section 2 traces the evolution of EU customs governance and the need for transformation. Section 3 approaches data driven customs governance and examines its emerging architecture. Section 4 addresses the eight-dimensional framework to compare traditional customs governance with data driven customs governance. Section 5 discusses the implications and limits of this transformation. Section 6, restates the principal findings, considers their policy implications and limitations, and identifies directions for further research.

2. THE EVOLUTION OF EU CUSTOMS GOVERNANCE AND THE NEED FOR TRANSFORMATION

For much of the modern period, traditional customs governance was organised around the individual transaction. In this framework, documentary verification, classification, valuation, origin and duty assessment were central. Physical inspection was used selectively, reflecting an earlier trade environment and the historical construction of the EU Customs Union. Common rules, as possible, developed at Union level, while Member States retained their own services, personnel, control locations and enforcement traditions, resulting in legal integration without a unitary customs bureaucracy (McLinden et al., 2011; Widdowson, 2020; Walsh, 2022).

At the EU's external border, customs authorities were increasingly expected to protect the Union's interests, acquiring a much broader role over time. As the role of customs widened, assessing a customs decision became more complex as it was no longer enough to determine whether the correct duty had been collected. Also, customs authorities had to consider restrictions on particular goods, health and safety rules, environmental legislation, and other requirements enforced at the border. This meant working with more public authorities and drawing on information held in different databases, making border control increasingly dependent on the ability of these authorities to exchange information and work together (McLinden et al., 2011; Polner, 2011).

As trade volumes grew, physically inspecting every shipment was no longer practical or an efficient use of customs resources, leading customs administrations to move towards risk-based controls. This shift focused attention on goods, transactions, operators, or routes that are more likely to involve non-compliance or where the consequences could be more serious. The WTO Trade Facilitation Agreement encourages the use of risk management and pre-arrival processing, while the WCO SAFE Framework combines trade facilitation with supply chain security and cooperation with trusted traders (WTO, 2013; WCO, 2025). Risk management allows customs to release legitimate trade more quickly by concentrating controls on movements of a higher risk.

Regulation (EU) No 952/2013, the Union Customs Code (UCC), brought electronic data processing, risk management, pre-arrival information, simplified procedures, centralised clearance, and the Authorised Economic Operator framework into EU customs law (European Parliament and Council, 2013). This framework provided the legal basis for paperless customs procedures. It also, paved the way for applying different levels of control according to risk and compliance. However, it did not substantially change the division of responsibilities between the EU and the Member States. EU legislation continued to provide the common rules, while national customs administrations operated much of the information infrastructure and carried out the controls.

Risk-based supervision also depends on having the right information at the right time. Customs authorities no longer use data only to check individual declarations, but they also use data to compare cases, identify patterns, and decide where closer control is needed. Having reliable information earlier makes it easier for customs authorities to decide whether a shipment needs closer inspection or other kind of intervention. Therefore, advance cargo information, post-clearance audits, and an operator's compliance history allow customs control to extend beyond the point at which goods physically cross the border. This approach is described by Widdowson (2020) as an integrated compliance approach, where the level of intervention depends on the risk involved and, on the operator's, previous record rather than on applying the same level of control to every transaction.

National declaration systems, authorization procedures, and working practices still vary across Member States. This fact makes it harder to obtain a consistent picture of trade flows across the EU. The European Court of Auditors (2021) found that customs controls were not sufficiently harmonised. Hausemer et al. (2022) identified differences in authorisation procedures and called for stronger common risk analysis. Differences in implementation are linked to uneven performance in customs controls (Erkoreka and Blas, 2023), and goods released in one Member State can then circulate within the common customs territory. Weak controls in one country can therefore affect the Union as a whole. Cooperation mechanisms and trans-European systems are already in place, but they still operate alongside national systems and practices that differ considerably, making it harder for customs authorities to work with the same information and keep that information up to date across the EU (Izdebski, 2024; Pickett and Wolffgang, 2023; Antov et al., 2026).

E-commerce has made these problems harder to ignore, as billions of low-value consignments now move through fast and highly dispersed logistics networks, with sellers, platforms, carriers, and consumers often holding different parts of the information needed by customs. Customs authorities cannot realistically check every transaction one by one. This creates room for undervaluation, inaccurate descriptions, and gaps in responsibility. All of these can lead to lost customs revenue, weaker product safety controls, and unfair competition (Chen, 2023; European Commission, 2025). Customs authorities need to bring together information from different actors and across different stages of a shipment. This is also becoming necessary for environmental, health, safety, sanctions, and market surveillance rules enforced at the border, since these controls often involve several public authorities as well as private actors in the supply chain (Polner, 2011; McLinden et al., 2011).

These problems point to a basic tension according to which customs operates within a common EU customs territory. Much of the information customs relies on is still organized through separate national systems. By adding

another national application or increasing the exchange of information between existing systems would not solve this problem. The issue is not only technical, but it also concerns how information is provided, who can access it, how it is analyzed, and how it is then used to decide where controls are needed (Hausemer et al., 2022; Walsh, 2022). The Wise Persons Group (2022) called for a stronger EU role in customs, and the development of common data capacity and stronger coordination at European level. There is need for change at three levels, the practical, organizational and institutional. Initially, in practical terms, customs authorities need earlier and more complete information if they are to use limited control resources effectively. Second, at the organizational level, the EU needs a permanent capacity to analyze common data, identify shared risks, support national authorities, and coordinate responses when problems affect more than one Member State. Finally, at the institutional level, the relationship between the Commission, national customs authorities, and traders also needs to change, so that reliable and compliant operators can be treated differently without weakening common standards. The current transformation moves in all three directions. If implemented as intended, it would change not only the tools available to customs authorities, but also the way customs governance is organized across the EU.

3. DATA DRIVEN CUSTOMS GOVERNANCE

Based on van Ooijen, Ubaldi and Welby (2019) and Janssen et al. (2020), our analysis defines data driven EU customs governance as a form of multilevel customs administration in which interoperable, continuously updated and reusable data become a shared institutional resource for supervising goods, economic operators and supply chains. Within the emerging EU customs architecture, common information infrastructures allow data to be submitted, reused and analysed across administrative levels, while shared analytical capabilities support risk identification, the coordination and targeting of controls, trade facilitation and administrative decision making across the Union (Pickett and Wolffgang, 2023; van Doornik and Groenewoud, 2024). These processes remain subject to human judgement, legal safeguards and institutional accountability, particularly where data analytics are used to inform customs risk management and operational decisions (Janssen et al., 2020; Vijayakumar, 2025).

We argue that data driven customs governance is broader than the digitalization of declarations and the outline of new information technologies. Data help determine who and what receives attention, when controls take place, how risks are identified, how authorities work together, and how traders interact with customs administrations. At the center of the emerging customs architecture is the EU Customs Data Hub (Hub). Under the 2026 compromise, the Hub is intended to become a single online environment in which businesses submit customs information once and reuse it for multiple movements. National

administrations access common data, while the EU Customs Authority uses the Hub to support Union wide risk management (Council of the European Union, 2026c). The agreed timetable envisages operation for e-commerce goods from 1 July 2028, optional use for other economic operators from 1 March 2031 and mandatory use for all customs movements from 1 March 2034 (Council of the European Union, 2026c). The Hub can be seen more than an IT system. By determining who supplies information, who can access it, how data are linked and how Union wide analysis is produced, it becomes a shared administrative resource. The reform also moves away from repeated document like declarations towards reusable data generated across commercial processes, making supply chain-based analysis more feasible (European Commission, 2023a, 2023b; Pickett and Wolffgang, 2023). This common environment may reduce duplication and improve traceability, but it also makes data governance, access, correction, retention, interoperability and responsibility central institutional questions (Janssen et al., 2020; Izdebski, 2024).

The common data environment is matched by a new organizational capacity at Union level. The European Union Customs Authority (EUCA) is established as a decentralized EU agency based in Lille, with functions that include operating the Hub, analyzing Union wide customs data, supporting common risk criteria and priority control areas, issuing control recommendations and coordinating customs crisis management (Council of the European Union, 2026a, 2026c). Its significance lies in creating a permanent center for analysis, coordination and expertise which can identify cross border patterns that may remain invisible in national datasets and can support more consistent prioritization. EUCA though does not replace national administrations as member States continue to deploy officers, inspect goods, investigate infringements and apply national procedures and sanctions. The emerging arrangement is therefore one of functional centralization where data, analytics, standards and coordination become more European, while coercive and territorial enforcement remains national. Common risk management links these levels through data, local intelligence and operational feedback.

The Trust and Check framework adds a public and private dimension, developing the logic of the Authorized Economic Operator by linking enhanced simplifications to greater transparency and reliable access to business information. Qualifying operators may use streamlined arrangements and the most reliable may release goods without active customs intervention in each case (Council of the European Union, 2026c). In practice, traders receive simpler treatment when they give customs greater visibility into their operations. Supervision then relies less on repeated checks of individual consignments and more on systems, records, internal controls, and compliance history (Schippers, 2023; Pickett and Wolffgang, 2023). This differentiation can help customs concentrate resources on opaque or higher risk supply chains, consistent with

integrated compliance management and the WCO SAFE Framework (Widdowson, 2020; WCO, 2025). It may also advantage firms with greater capacity to finance integrated systems and continuous data provision. This makes proportionality and support for smaller operators important (Antov et al., 2026; Council of the European Union, 2026c). Continuous information also allows supervision to continue before arrival, during movement, and after release. This gives customs a risk picture that can change over time rather than remain fixed.

Nevertheless, data driven customs governance is only as reliable as the information and institutional controls on which it depends, as incomplete, outdated or distorted data can lead to uneven treatment, making common quality standards, correction mechanisms and clear data stewardship essential (Janssen et al., 2020). The Commission also envisages the use of machine learning, artificial intelligence and human intervention in supply chain analysis (European Commission, 2026a). Such tools may improve prioritization, but because choices about variables, thresholds, and training data involve administrative judgement, digitalization may shift discretion towards system designers and data managers rather than remove it. Accountable use requires analytical systems that can be audited, with clear records of human review and procedures for correcting factual errors. Where decisions affect operators, authorities should also provide reasons that are sufficient for administrative or judicial review (Busuioc, 2021). Human expertise remains indispensable, as customs officers interpret intelligence, assess legal relevance and adapt interventions to operational context. The more appropriate approach is therefore digitally augmented professional judgement operating within an auditable institutional framework (Vijayakumar, 2025).

4. THE INSTITUTIONAL TRANSFORMATION OF EU CUSTOMS GOVERNANCE: FROM TRADITIONAL TO DATA DRIVEN CUSTOMS GOVERNANCE

The transformation becomes institutionally significant not because it introduces new instruments, but because those instruments alter how customs governance is organized and exercised. The Data Hub, the European Union Customs Authority and the Trust and Check framework matter because they reshape how information is assembled, how risks are interpreted, how authorities coordinate and how traders are supervised.

In Table 1, we identify eight dimensions through which institutional transformation can be observed and compares traditional customs governance with data driven customs governance in terms of both administrative practice and institutional consequence.

Table 1. From traditional to data driven EU customs governance

Dimension	Traditional customs governance	Data driven customs governance	Institutional implication
1.Object of supervision	Individual consignment and declaration	Operator, supply chain and linked patterns	Risk is assessed longitudinally; the operator becomes a continuing object of supervision.
2.Temporal reach	Lodging, arrival and release	Pre arrival, real time and post clearance information	Supervision becomes more continuous and preventive.
3.Spatial organization	Customs office and physical border	Distributed digital and supply chain environment	Informational control is less territorial, while physical enforcement remains national.
4.Information architecture	Fragmented national and trans-European systems	Common EU Customs Data Hub	Shared infrastructure centralizes visibility and standardizes data relations.
5.Control logic	Document checks, inspection and transaction selectivity	Integrated, intelligence led risk assessment	Common analytics guide selective use of national control resources.
6.Allocation of authority	EU rules with mainly national analysis and execution	EUCA analytics and coordination with national enforcement	Functional centralization deepens integration without a unitary EU customs service.
7.Trader relationship	Declarations and clearance events	Continuous data sharing and Trust and Check supervision	Facilitation is exchanged for transparency and continuing compliance.
8.Safeguards	Uneven practice and diffuse coordination	Data quality, governance of analytical systems, cybersecurity and cross level responsibility	Shared capacity creates Union wide dependencies requiring auditable safeguards.

Source: authors' elaboration

The object and temporal reach dimensions draw primarily on customs modernization and integrated risk and compliance research It emphasizes the assessment of operators, compliance histories and supply chain risks beyond the

individual transaction and the immediate point of clearance (Widdowson, 2020; WCO, 2025).

The spatial organization dimension is informed by border management research, which places effective customs control within a wider environment of coordination among authorities and actors across borders and supply chains (McLinden et al., 2011; Polner, 2011).

The control logic and trader relationship dimensions build on risk-based intervention, differentiated compliance management and trusted trader arrangements, together with scholarship examining how these principles are developed within the proposed EU customs reform (Widdowson, 2020; Pickett and Wolffgang, 2023; Schippers, 2023; WCO, 2025).

The allocation of authority dimension draws on research on the European administrative space and multilevel administration, which explains how European integration can develop through shared implementation, administrative cooperation and common instruments without replacing national administrations, together with EU agency scholarship on the relationship between agency autonomy, control and accountability (Hofmann, 2008; Heidbreder, 2011; Busuioc, 2009).

The information architecture dimension is grounded in data driven public administration and data governance research, which treats data, common standards, information sharing and reusable data infrastructures as components of administrative capacity, and in work examining the EU Customs Data Hub as a centralized environment for a more data driven approach to customs (van Ooijen, Ubaldi and Welby, 2019; Janssen et al., 2020; van Doornik and Groenewoud, 2024).

The safeguards dimension draws more specifically on research showing how digital and data intensive administration can relocate administrative discretion towards information systems and analytical processes, creating corresponding requirements for data governance, scrutiny, due process and accountability (Bovens and Zouridis, 2002; Janssen et al., 2020; Busuioc, 2021).

We use the Union Customs Code as the starting point for assessing these dimensions (European Parliament and Council, 2013). The Commission's 2023 proposals show the initial direction of the reform, while the 2026 compromise and Council first-reading texts provide the more developed legal framework used in our analysis (European Commission, 2023a, 2023b; Council of the European Union, 2026b, 2026c). We treat institutional transformation as the combined effect of changes across the dimensions, rather than as the result of any single measure. Table 1 follows the transformation across the selected eight dimensions:

1. *Object of supervision*: what is supervised.
2. *Temporal reach*: when supervision occurs.
3. *Spatial organization*: where supervision occurs.

4. *Information architecture*: how information is organized.
5. *Control logic*: how intervention is targeted.
6. *Allocation of authority*: where authority lies.
7. *Trader relationship*: how customs relates to traders.
8. *Safeguards*: what safeguards make the system lawful and resilient.

1. *Object of supervision*

It determines the unit around which customs knowledge and intervention are organised. Under traditional customs governance, the declaration and the individual consignment remain the dominant points of attention. Modern customs literature, however, has long stressed that risk cannot be assessed only at the level of individual shipments. Authorities also need to consider an operator's compliance history and the wider commercial relationships behind each movement (Widdowson, 2020; WCO, 2025). The current reform takes this logic further by placing declarations and consignments within broader records of operator behavior, linked transactions and supply chain relationships (Pickett and Wolffgang, 2023; Council of the European Union, 2026c). The important change here is that customs no longer looks only at individual shipments. An operator's current behavior is assessed against its past record, while risk is also identified through recurring patterns and relationships between firms.

2. *Temporal reach*

Under traditional customs governance, control is concentrated at specific procedural stages, such as lodging, arrival, presentation, and release, while post-clearance audit takes place later as a separate form of control. Customs modernization has gradually widened this time frame through advance information, pre-arrival processing, and post-clearance audit, allowing authorities to intervene more selectively before release and to assess compliance after the goods have entered circulation (McLinden et al., 2011; Widdowson, 2020; WCO, 2025). Data driven customs governance extends this logic further, it connects information before arrival, during movement and after release within a common data environment (European Commission, 2023a; Council of the European Union, 2026c). At the end of this process, supervision is becoming more continuous and proactive. Although the decision regarding border crossing remains significant, it increasingly constitutes one stage of a broader risk assessment process.

3. *Spatial organization*

Traditionally, customs control has been based on the customs office and the physical external border. Research on coordinated border management, shows that modern customs supervision now extends well beyond these locations where effective control depends on cooperation among authorities, logistics

actors and other participants across the wider supply chain (Polner, 2011; McLinden et al., 2011). Shared data intensify this change because relevant information can be produced, accessed and analyzed at different points across the Customs Union and across commercial processes. A supply chain event in one place can shape a risk assessment elsewhere, so while the physical border remains important, informational supervision is less tied to a single territory and physical enforcement remains national.

4. *Information architecture*

Data driven public administration literature treats information infrastructure as part of administrative capacity. For instance, van Ooijen, Ubaldi and Welby, (2019) and Janssen et al. (2020) discuses that common standards, access rules, and data sharing arrangements shape both what public authorities can know and what they are able to do. In the emerging customs system, information is distributed across national and trans European systems. The Data Hub is intended to create a common environment. Within this environment, information can be submitted, reused, linked and analyzed across the Union (European Commission, 2023a, 2023b; van Doornik and Groenewoud, 2024; Council of the European Union, 2026c). Its institutional importance goes beyond technical consolidation, since a common information environment gives customs authorities a shared view of data and makes Union wide analysis part of routine administration.

5. *Control logic*

Control logic concentrates on how administrative knowledge is used to decide when and where customs should intervene. Traditional customs governance relies mainly on documentary checks, physical inspection, and transaction-level selectivity, while integrated compliance and risk management use information on operators, routes, goods, and past behavior to focus resources on higher-risk activity (Widdowson, 2020; WCO, 2025). Data driven customs governance strengthens this approach by combining common data with Union wide analytical capacity and shared risk priorities (Pickett and Wolffgang, 2023; Council of the European Union, 2026c). The shift does not replace entirely physical control with digital control however it creates a more integrated analytical cycle in which information, prioritization, targeting and operational feedback is more closely connected.

6. *Allocation of authority*

Authority integration is developed through shared implementation, agencies, networks, and common instruments rather than by replacing national administrations with a single supranational bureaucracy (Hofmann, 2008; Heidbreder, 2011). The EUCA follows this pattern. It creates a permanent

Union-level centre to operate the Hub, analyze data, coordinate common risks, provide expertise, and support crisis response. National customs authorities, however, retain the main powers to deploy officers, inspect goods, investigate infringements, and apply national procedures and sanctions (Council of the European Union, 2026c). This creates a pattern of functional centralization, with analysis and coordination moving increasingly to the EU level while coercive authority remains mainly national. EU agency research also makes clear why accountability matters in such arrangements, since formal competence and practical influence may not always coincide (Busuioc, 2009).

7. Trader relationship

Integrated compliance frameworks as for example the WCO SAFE Framework treats trusted trader arrangements as a way of adjusting supervision according to an operator's level of compliance. Operators that provide stronger assurance about their systems and behavior can benefit from greater facilitation. This allows customs authorities to focus more attention on less transparent or higher-risk activity (Widdowson, 2020; WCO, 2025). Trust and Check develops this rationale by linking enhanced simplification to continuing access to reliable business information and internal compliance systems (Schippers, 2023; Pickett and Wolffgang, 2023; Council of the European Union, 2026c). The relationship moves beyond repeated declarations and individual clearance events, as the operator's own information and compliance record become part of ongoing supervision. This creates a more cooperative relationship, but it remains firmly regulatory because facilitation depends on transparency and continuing compliance.

8. Safeguards

Customs supervision now relies more heavily on shared data, automated analysis, and decisions taken across several administrative levels. This makes the safeguards around these processes part of the manner the system itself is organized. Information systems can move discretion away from frontline encounters and towards system design, data structures and analytical rules, raising new questions about due process and control (Bovens and Zouridis, 2002). Trustworthy public administration also depends on data quality, traceability, clear sharing rules, and effective scrutiny (Janssen et al., 2020). Algorithmic accountability also requires clear responsibility for the analytical systems that influence administrative decisions (Busuioc, 2021). In the customs context, these concerns are amplified by the Union wide scale of the Hub and by the interaction between EU analysis and national enforcement. Therefore, data quality, governance of analytical systems, human review, cybersecurity, auditability and clear responsibility across administrative levels are vital institutional requirements rather than secondary technical issues.

5. DISCUSSION

The transformation changes the field of supervision more lengthily than it changes the formal location of enforcement. Operators, supply chains and linked transactions become more important objects of knowledge; supervision extends across time and space; and the Data Hub creates a common informational field in which data can be linked and analyzed at Union scale. EUCA then gives organizational form to this common capacity, while national administrations retain the principal coercive powers. The updated result is a functional centralization rather than a unitary customs service.

This pattern clarifies what deeper European integration means in customs governance. Integration does not depend entirely on transferring executive powers to the Union level but how it can also proceed through shared infrastructure, common analytical capacity and administrative interdependence. This resembles the European administrative space described by Hofmann (2008) and Heidbreder (2011), where agencies and common instruments connect national administrations without replacing them. In customs, the asymmetry is especially clear: information and coordination become more European, while territorial enforcement remains national. A common platform cannot by itself eliminate differences in national administrative capacity, information systems and implementation practices, or the continuing diversity of national sanctions regimes (Hausemer et al., 2022; Antov et al., 2026). The European Court of Auditors (2021) documents substantial variation in the application and intensity of customs controls across Member States, including differences associated with national implementation of common risk criteria and the resources available to customs authorities. Erkoreka and Blas (2023) similarly show that differentiated implementation of common EU customs rules can produce divergent control performance and undermine an equivalent level of customs enforcement across the Union. The practical test is therefore not whether all national variation disappears, but whether such variation becomes more visible, reasoned and bounded within common standards and shared information.

Accountability is equally important because decisions will be built across several administrative levels. Union analysis may identify a risk, a national administration may decide how to act, and the Commission may become involved where follow up is inadequate. Such interdependence can improve coordination while making responsibility harder to locate. EU agency scholarship therefore suggests that accountability should follow actual influence as well as formal competence (Busuioc, 2009). Traceable records are needed to distinguish the source of data, the Union analytical contribution, the national decision and the forum responsible for review (Janssen et al., 2020; Busuioc, 2021).

Data dependent administration creates an additional layer of responsibility. The Council text introduces a Data Auditor within the EUCA governance

framework, strengthening oversight of access to and use of the EU Customs Data Hub (Council of the European Union, 2026c). As discretion shifts partly towards data structures and analytical tools, governance must also address the assumptions embedded in those systems (Bovens and Zouridis, 2002; Busuioc, 2021). Inventories of analytical systems, validation procedures, decision logs, meaningful human review and effective routes for correcting or contesting data are therefore important complements (Janssen et al., 2020; Faone, 2025).

Deeper integration also brings shared operational risk. An outage, cybersecurity incident or defective common data standard could affect several administrations at once (Council of the European Union, 2026c; Izdebski, 2024). Resilience therefore requires redundancy, tested fallback procedures, staged migration and clear incident responsibility, not only legal provision. Distributional effects matter as well. Smaller firms and administrations may face proportionately higher adaptation costs, so implementation should include proportionate requirements, guidance and accessible support (Schippers, 2023; Antov et al., 2026; WCO, 2025). These limits define rather than weaken the argument. The emerging order is best understood as hybrid multilevel governance. Union infrastructure and coordination coexist with national implementation; data supported analysis is paired with professional judgement; and facilitation for trusted operators remains coupled to coercive control of higher risk trade. The transformation centralizes administrative capacity more extensively than legal responsibility. Its effectiveness and legitimacy will depend on whether the interfaces between these levels are sufficiently resourced, reviewable and resilient.

6. INSTEAD OF A CONCLUSION

In this paper, we examined how far the current transformation changes the way EU customs governance is organized and what this tells us about deeper European integration. We argue that describing the transformation simply as digitalization misses an important part of what is taking place.

To assess the change more systematically, we developed an eight-dimensional framework which operationalizes institutional transformation across the object, temporal reach, spatial organization, information architecture, control logic, allocation of authority, trader relationship and safeguards of customs supervision. The framework brings together insights from three areas of research, customs modernization and compliance management, European multilevel administration, and data-driven public administration. We use these perspectives to examine the reforms introduced between 2023 and 2026 and to show how they affect different parts of customs supervision. The changes point away from a traditional customs governance system focused mainly on individual transactions and controls at the physical border leading instead to the emergence of a more continuous form of supervision. This shift is centred

increasingly on operators and supply chains, supported by a common data environment and a stronger centralized analytical role.

Our main finding is that integration is deepest where the transformation centralizes information, analytical capacity, risk coordination and shared administrative infrastructure, and less extensive where coercive enforcement is concerned. The EU Customs Data Hub creates a common information environment, while the European Union Customs Authority provides a permanent organizational capacity to analyze that information and support common priorities. In addition, the Trust and Check approach makes trader transparency and compliance history central to differentiated supervision. Yet, national customs authorities remain the main operational actors.

The paper's main contribution is the eight-dimensional framework, which helps explain how shared infrastructure can bring national customs administrations closer together. European integration in this case does not mainly come from transferring all executive powers to a single EU customs service. It develops instead through shared data systems, stronger EU-level analysis, common risk practices, and closer links between national customs administrations and economic operators. The eight dimensions framework we developed shows why this transformation is simultaneously deep and incomplete. Information, analysis, and coordination are increasingly organized at EU level, while coercive enforcement remains largely national. The result is a hybrid form of multilevel customs governance, combining stronger central coordination with decentralized enforcement.

According to the framework of this paper implementation policy should be treated as institutional capacity building rather than as a procurement exercise. Data standards, interoperability, cybersecurity, staff skills, governance of analytical systems, feedback from controls and clear accountability between EU and national bodies will determine whether the architecture produces coherent supervision. The transformation also needs to work for smaller customs administrations and smaller economic operators. If they do not have the resources or capacity to use the new system effectively, the rules may be common across the EU while access and the quality of customs controls still vary in practice.

Our analysis is necessarily limited because it relies on legal and institutional documents and examines a reform that has been politically agreed but not yet formally adopted, implemented, or tested in practice. The analysis of this paper cannot establish how national administrations will respond, how well the Hub will perform, whether common risk recommendations will alter controls, or how operators will experience the Trust and Check framework. Also, the analysis concentrates on institutional architecture rather than providing a complete doctrinal analysis of customs liability, sanctions, data protection or judicial

remedies. Therefore, our findings should be understood as an *ex-ante* institutional interpretation and not an assessment of implementation outcomes.

Further research should examine how the transformation works in practice across Member States, including its effects on control outcomes, false positives and negatives, clearance times, revenue collection, and enforcement in non-fiscal areas. It is also important to examine how responsibilities are actually divided between the EUCA and national authorities. Also, how automated risk tools can be audited, whether trusted trader status creates unequal effects, and how resilient the common data infrastructure proves to be. These issues will show whether the ambition to "act as one" can produce more consistent customs administration across the EU while preserving the discretion and operational capacity of national authorities.

References

1) Antov, M., Peycheva, B., Kostova, S. and Zhelev, Z. (2026). Digital Aspects of Customs Control in the New European Customs Reform Initiative. World Customs Journal, 20(1), pp. 44–66. https://doi.org/10.55596/001c.156039.
2) Bovens, M. and Zouridis, S. (2002). From Street-Level to System-Level Bureaucracies: How Information and Communication Technology Is Transforming Administrative Discretion and Constitutional Control. Public Administration Review, 62(2), pp. 174–184. https://doi.org/10.1111/0033-3352.00168.
3) Busuioc, M. (2009). Accountability, Control and Independence: The Case of European Agencies. European Law Journal, 15(5), pp. 599–615. https://doi.org/10.1111/j.1468-0386.2009.00480.x.
4) Busuioc, M. (2021). Accountable Artificial Intelligence: Holding Algorithms to Account. Public Administration Review, 81(5), pp. 825–836. https://doi.org/10.1111/puar.13293.
5) Chen, S.-C. (2023). EU Customs Reform in 2023: The Data-Driven Approach. Caribbean Tax Law Journal, 4, pp. 23–27. Available at: https://caribbeantaxlawjournal.com/past-issues/ [Accessed 02.09.2026].
6) Council of the European Union (2026a). EU customs: Council and Parliament agree on landmark reform. 26 March. [online] Available at: https://www.consilium.europa.eu/en/press/press-releases/2026/03/26/eu-customs-council-and-parliament-agree-on-landmark-reform/ [Accessed 02.09.2026].
7) Council of the European Union (2026b). Proposal for a Regulation of the European Parliament and of the Council establishing the Union Customs Code and the European Union Customs Authority: Confirmation of the final compromise text with a view to agreement. ST 7771/26 ADD 1 and COR 1, 10 and 14 April. [online] Available at: https://data.consilium.europa.eu/doc/document/ST-7771-2026-ADD-1/en/pdf [Accessed 02.09.2026].
8) Council of the European Union (2026c). Position of the Council at first reading with a view to the adoption of a Regulation of the European Parliament and of the Council establishing the Union Customs Code and the European Union Customs Authority. ST 8190/26, 24 August. [online] Available at:

https://data.consilium.europa.eu/doc/document/ST-8190-2026-INIT/en/pdf [Accessed 02.09.2026].
9) Erkoreka, M. and Blas, A. (2023). Implementation Performance in the Field of the EU Customs Union: Consequences of Differentiated Policy Implementation on Customs Control Efficiency. Journal of European Integration, 45(5), pp. 803–821. https://doi.org/10.1080/07036337.2023.2183198.
10) European Commission (2023a). Proposal for a Regulation of the European Parliament and of the Council establishing the Union Customs Code and the European Union Customs Authority, and repealing Regulation (EU) No 952/2013. COM(2023) 258 final.
11) European Commission (2023b). Customs reform: Taking the Customs Union to the next level. COM(2023) 257 final.
12) European Commission (2025). Tackling challenges with e-commerce imports. 5 February. [online] Available at: https://commission.europa.eu/news-and-media/news/tackling-challenges-e-commerce-imports-2025-02-05_en [Accessed 02.09.2026].
13) European Commission (2026a). EU customs reform: Boosting competitiveness, strengthening economic security, modernising customs. Luxembourg: Publications Office of the European Union. https://doi.org/10.2778/1870731.
14) European Commission (2026b). Communication from the Commission to the European Parliament pursuant to Article 294(6) of the Treaty on the Functioning of the European Union concerning the position of the Council on the adoption of a Regulation of the European Parliament and of the Council establishing the Union Customs Code and the European Union Customs Authority. COM(2026) 436 final, 4 September. [online] Available at: https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:52026PC0436 [Accessed 06.09.2026].
15) European Court of Auditors (2021). Customs controls: insufficient harmonisation hampers EU financial interests. Special Report 04/2021. Luxembourg: European Court of Auditors.
16) European Parliament and Council (2013). Regulation (EU) No 952/2013 of the European Parliament and of the Council laying down the Union Customs Code. Official Journal of the European Union, L 269, pp. 1–101.
17) Faone, C. (2025). Risk Analysis in EU Customs Controls. Athens Journal of Law, 11(4), pp. 641–658. https://doi.org/10.30958/ajl.11-4-14.
18) Hausemer, P., Bosch Chen, I., Patroclou, N., Ibanez Marsilla, S., Lux, M. and Van Giel, M. (2022). A Comparative Analysis of Member States' Customs Authorisation Procedures for the Entry of Products into the European Union. Luxembourg: European Parliament, Policy Department for Economic, Scientific and Quality of Life Policies.
19) Heidbreder, E.G. (2011). Structuring the European Administrative Space: Policy Instruments of Multi-level Administration. Journal of European Public Policy, 18(5), pp. 709–727. https://doi.org/10.1080/13501763.2011.586800.
20) Hofmann, H.C.H. (2008). Mapping the European Administrative Space. West European Politics, 31(4), pp. 662–676. https://doi.org/10.1080/01402380801905918.

21) Izdebski, J. (2024). IT Reform of the European Union Customs System and Customs Administration. Krytyka Prawa, 16(4), pp. 219–229. https://doi.org/10.7206/kp.2080-1084.730.
22) Janssen, M., Brous, P., Estevez, E., Barbosa, L.S. and Janowski, T. (2020). Data Governance: Organizing Data for Trustworthy Artificial Intelligence. Government Information Quarterly, 37(3), 101493. https://doi.org/10.1016/j.giq.2020.101493.
23) McLinden, G., Fanta, E., Widdowson, D. and Doyle, T., eds. (2011). Border Management Modernization. Washington, DC: World Bank.
24) Pickett, E. and Wolffgang, H.-M. (2023). The European Commission's Proposal for a Modernised Union Customs Code: A Brief Introduction. World Customs Journal, 17(2), pp. 132–147. https://doi.org/10.55596/001c.90961.
25) Polner, M. (2011). Coordinated Border Management: From Theory to Practice. World Customs Journal, 5(2), pp. 49–64. https://doi.org/10.55596/001c.92724.
26) Schippers, M.L. (2023). Proposals to Reform the EU Customs Union. EC Tax Review, 32(6), pp. 253–262. https://doi.org/10.54648/ECTA2023031.
27) van Doornik, E. and Groenewoud, G. (2024). EU Customs Data Hub: Data-Driven Approach to Customs in an Ever-Growing Digitalised Custom Landscape. Global Trade and Customs Journal, 19(6), pp. 396–402. https://doi.org/10.54648/gtcj2024052.
28) van Ooijen, C., Ubaldi, B. and Welby, B. (2019). A Data-Driven Public Sector: Enabling the Strategic Use of Data for Productive, Inclusive and Trustworthy Governance. OECD Working Papers on Public Governance, No. 33. Paris: OECD Publishing. https://doi.org/10.1787/09ab162c-en.
29) Vijayakumar, S. (2025). Technology-centric and Data-Driven Customs Risk Management for Supply Chain Security. World Customs Journal, 19(1), pp. 38–63. https://doi.org/10.55596/001c.131745.
30) Walsh, T. (2022). Putting More Union in European Customs. World Customs Journal, 16(2), pp. 57–80. https://doi.org/10.55596/001c.116321.
31) WCO (2025). SAFE Framework of Standards to Secure and Facilitate Global Trade. Brussels: World Customs Organization. Available at: https://www.wcoomd.org/en/topics/facilitation/instrument-and-tools/frameworks-of-standards/safe_package.aspx [Accessed 02.09.2026].
32) Widdowson, D. (2020). Managing Customs Risk and Compliance: An Integrated Approach. World Customs Journal, 14(2), pp. 63–80. https://doi.org/10.55596/001c.116418.
33) Wise Persons Group (2022). Putting More Union in European Customs: Ten Proposals to Make the EU Customs Union Fit for a Geopolitical Europe. Brussels: European Commission.
34) WTO (2013). Agreement on Trade Facilitation. Geneva: World Trade Organization.