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Organizational Capabilities for Integrated Customs Risk Management: A Structured Scoping Review of Accessible Research with Implications for Morocco

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Abstract:

Customs administrations use risk management to allocate scarce inspection capacity among revenue protection, security and trade facilitation. Earlier syntheses list the themes of this field without connecting the organizational mechanisms they invoke to the level of evidence behind each claimed outcome, and none examines what this evidence means for Morocco, where customs revenue reached 144.8 billion dirhams in 2024 for more than two million declarations. This structured scoping review answers three questions. RQ1 asks which informational and organizational mechanisms are supported by accessible research. RQ2 asks which fiscal, security and facilitation outcomes have been evaluated and with what strength of evidence. RQ3 asks which conditions govern the transfer of these findings to Moroccan customs. A documented web retrieval strategy executed on 18 October 2026 captured 378 records in English and French published since 2020, and 32 contributions met the eligibility criteria. Screening and extraction were assisted by a large language model workflow with recorded decisions and human verification of every screening decision. Framework guided narrative synthesis graded every link between a mechanism and an outcome according to research design. One study provides strong evidence of an administrative effect, twelve provide moderate evidence from computational benchmarks, surveys or interview-based cases and nineteen provide weak descriptive or conceptual evidence. Information quality, inspection feedback and integrity safeguards receive the most consistent support, whereas coordination mechanisms rest on descriptive cases. The review contributes a graded explanatory framework, an evidence matrix, prioritized implications for the Moroccan customs administration and a research agenda.

Keywords: Customs risk management; scoping review; organizational capabilities; integrity; evidence synthesis; Morocco.
JEL Classification: F13; H26; H83
Paper type: Literature review (structured scoping review)

Résumé :

Les administrations douanières recourent à la gestion des risques pour répartir une capacité d'inspection limitée entre la protection des recettes, la sécurité et la facilitation des échanges. Les synthèses antérieures recensent les thèmes de ce champ sans relier les mécanismes organisationnels au niveau de preuve de chaque résultat, et sans examiner leur portée pour le Maroc, où les recettes douanières ont atteint 144,8 milliards de dirhams en 2024 pour plus de deux millions de déclarations. Cette revue de cadrage structurée répond à trois questions. QR1 porte sur les mécanismes informationnels et organisationnels étayés par la recherche accessible. QR2 porte sur les résultats fiscaux, sécuritaires et de facilitation évalués et sur la force des preuves. QR3 porte sur les conditions de transfert de ces résultats à la douane marocaine. Une recherche web documentée, exécutée le 18 octobre 2026, a capté 378 notices en anglais et en français publiées depuis 2020, dont 32 contributions éligibles. La sélection et l'extraction ont été assistées par un grand modèle de langage, avec un registre des décisions et une vérification humaine de chaque décision de sélection. Une synthèse narrative guidée par un cadre d'analyse a gradué chaque lien entre un mécanisme et un résultat selon le devis de recherche. Une étude fournit une preuve solide d'un effet administratif, douze une preuve modérée issue de bancs d'essai computationnels, d'enquêtes ou d'études de cas, et dix-neuf une preuve faible, descriptive ou conceptuelle. L'information, la rétroaction des inspections et l'intégrité sont les mécanismes les mieux étayés, la coordination reposant sur des cas descriptifs. La revue apporte un cadre explicatif gradué, une matrice d'évidence, des implications hiérarchisées pour la douane marocaine et un agenda de recherche.

Mots clés : Gestion des risques douaniers ; revue de cadrage ; capacités organisationnelles ; intégrité ; synthèse des preuves ; Maroc.
Classification JEL : F13 ; H26 ; H83
Type du papier : Revue de littérature (revue de cadrage structurée)

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1. Introduction

Customs administrations decide which consignments require physical or documentary examination, which traders qualify for simplified procedures and which irregularities deserve investigation (Pérez Azcárraga et al., 2022). Risk management is the instrument that organizes these decisions under limited inspection capacity, and Article 7.4 of the Agreement on Trade Facilitation requires members to concentrate controls on high risk consignments and to expedite the release of low risk ones (World Trade Organization [WTO], 2014). The SAFE Framework of Standards and the Customs Risk Management Compendium translate this obligation into expectations about advance cargo information, selectivity criteria and partnership with authorized operators (World Customs Organization [WCO], 2011, 2021). Research on these arrangements has grown in several directions at once, covering selection algorithms, information partnerships, organizational integrity and the administration of compliance, and it produces evidence at several distinct levels (Kim et al., 2023; Zhou et al., 2021). Understanding what integration contributes therefore requires a synthesis that preserves these differences while examining the mechanisms that connect them (Gough, 2021).

The Moroccan case gives this question a concrete fiscal and administrative weight. Customs revenue reached 144.8 billion dirhams in 2024, an increase of 9.2 percent over 2023, which represented 41.2 percent of tax revenue and 9.6 percent of gross domestic product (Administration des Douanes et Impôts Indirects [ADII], 2025). The number of declarations exceeded two million for the first time, 64 percent of import declarations were released within four hours and 20.4 percent of import declarations were subject to targeted verification (ADII, 2025). The BADR clearance system generated 1,540 fraud notices and 434 new selectivity rules during the same year, and control activity produced 6.24 billion dirhams of additional revenue (ADII, 2025). Each of these indicators results from a decision about selectivity, and each raises the question of how information, coordination and integrity combine to produce it. Moroccan academic work on this question remains descriptive and documentary, with conceptual analyses of risk orientation and aggregate trends in clearance and revenue (Attaoui, 2026; Boutabratine, 2023; Dafir & Imarhane, 2024).

Two earlier syntheses are directly relevant. Karklina-Admine et al. (2024) reviewed the challenges of customs risk management and identified training, information exchange and the integration of risk management with intelligence functions as recurrent themes. Vijayakumar (2025) synthesized technology centred approaches to supply chain security with implementation examples drawn from several administrations. Both syntheses describe themes without grading the evidence behind each mechanism, without separating predictive performance from administrative effects and without application to a particular national administration. The economic literature on tariff evasion and customs corruption has established that selectivity, integrity and revenue are jointly determined, because evasion responds to tax rates and product differentiation and because discretion in inspection creates opportunities for collusion (Fisman & Wei, 2004; Javorcik & Narciso, 2008; Sequeira & Djankov, 2014). This literature is seldom connected to the organizational studies published in customs journals. The gap addressed here is therefore the absence of a synthesis that links organizational mechanisms, outcome domains and levels of evidence within one framework and that derives conditions of transfer for a specific administration.

The review answers three questions. RQ1 asks which informational and organizational mechanisms of integrated customs risk management are supported by accessible research published since 2020. RQ2 asks which fiscal, security and facilitation outcomes have been evaluated, through which research designs and with what strength of evidence. RQ3 asks which contextual conditions govern the transfer of these findings to Moroccan customs. The three

questions structure the methodology, the results and the conclusion, where each receives a separate answer.

The study is a structured scoping review rather than a full systematic review. Retrieval relied on a documented web search strategy executed on 18 October 2026, screening and extraction were assisted by a large language model workflow with a complete register of decisions and human verification of every screening decision, and the protocol was written on the day of the search without public registration. These features are reported in accordance with the PRISMA extension for scoping reviews and with PRISMA-S for literature searches (Rethlefsen et al., 2021; Tricco et al., 2018). The synthesis follows the guidance on narrative synthesis of Popay et al. (2006) and grades the evidence behind each finding according to research design.

The contribution is threefold. The article first proposes an explanatory framework anchored in the theory of organizational capabilities, stated a priori as five propositions and revised a posteriori with an evidence grade for each link. It then provides an evidence matrix that crosses mechanisms, outcome domains and evidence grades, supported by a critical appraisal of all 32 included contributions. It finally derives a prioritized set of implications and a research agenda for Morocco that specifies research questions, designs and data sources. The framework distinguishes an adopted arrangement from an effective routine, a predictive score from a realized collection and a reported practice from a demonstrated administrative effect.

The remainder of the article is organized as follows. Section 2 presents the theoretical foundations, the operational definitions of the outcome domains and the analytical framework with its propositions. Section 3 describes the review design, the eligibility criteria, the search strategy, the role of artificial intelligence and its human control, the critical appraisal procedure and the synthesis method. Section 4 reports the selection flow, the corpus characteristics, the appraisal results, the thematic coverage, the findings for RQ1 and RQ2 and the evidence matrix. Section 5 presents the revised framework, positions the review relative to earlier syntheses, answers RQ3 for Morocco, discusses the limitations and sets out the research agenda. Section 6 concludes.

2. Theoretical and conceptual framework

2.1. Theoretical foundations of organizational capability in customs administration

The concept of organizational capability is mobilized here because customs risk management combines technical resources and professional routines whose joint effect cannot be read from either alone. The resource based view holds that resources create advantage when they are valuable, rare and difficult to imitate (Barney, 1991). For a customs administration, the relevant resources are declaration data, inspection records, analytical expertise and relationships with traders and partner agencies. The dynamic capabilities perspective adds that resources produce results only through routines of sensing, seizing and reconfiguring, which in customs correspond to detecting anomalies, deciding on interventions and updating risk profiles from inspection results (Teece, 2007). Applied to public organizations, this perspective shows that such routines depend on leadership, learning arrangements and the constraints of legal mandates, and that public managers build capabilities through the accumulation of experience rather than through the adoption of tools (Pablo et al., 2007; Piening, 2013). State capacity research reaches a compatible conclusion, since the quality of government depends on the combination of professional capability and bounded autonomy (Fukuyama, 2013).

Research on data analytics capability provides the measurement bridge between this theory and customs analytics. Big data analytics capability comprises tangible resources, human skills and intangible resources such as data driven culture and organizational learning, and its effect on performance passes through dynamic and operational capabilities (Mikalef et al., 2020). Artificial intelligence capability is conceptualized with the same three families of resources and

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depends on data governance arrangements that secure the quality, accessibility and lawful use of data (Janssen et al., 2020; Mikalef & Gupta, 2021). Organizational resilience research adds the temporal dimension of anticipation, coping and adaptation, which describes how an administration learns from its interventions (Duchek, 2020). These works originate in private firms and in general public administration, and the review uses them as instruments for defining dimensions and indicators rather than as evidence about customs.

Agency theory applied to corruption explains why integrity belongs inside the concept of capability rather than outside it. Corruption increases with monopoly and discretion and decreases with accountability, and customs inspectors hold discretion over selection, valuation and classification (Klitgaard, 1988). Empirical research confirms the mechanism, since missing imports rise with tax rates, differentiated products facilitate underinvoicing, bribes in African ports respond to tariff levels and the allocation of inspectors to declarations can be manipulated to obtain favourable treatment (Chalendard et al., 2023; Fisman & Wei, 2004; Javorcik & Narciso, 2008; Sequeira & Djankov, 2014). Integrity safeguards and professional incentives therefore govern whether an analytically selected declaration produces a recorded enforcement outcome.

Neo-institutional theory completes the framework by explaining the diffusion of international standards. Organizations adopt similar structures through coercive, mimetic and normative pressures, which can produce formal conformity without operational change (DiMaggio & Powell, 1983). Customs administrations adopt the SAFE Framework, authorized economic operator programmes and risk management units under such pressures, and comparative documentary research on Morocco and five other countries shows that similar standards enter very different national configurations of authority and cooperation (Sabri & Mouhacine, 2026). This theory justifies a central distinction of the review, namely the distinction between an adopted arrangement and an effective routine, and it explains why documented arrangements cannot be read as evidence of administrative effects.

2.2. Customs risk management: normative framework, economic foundations and operational definitions

The normative framework of customs risk management is defined by three instruments. Article 7.4 of the Agreement on Trade Facilitation requires members to adopt a risk management system that concentrates controls on high risk consignments, avoids arbitrary discrimination and uses selectivity criteria such as tariff classification, origin, value and compliance history (WTO, 2014). The SAFE Framework structures cooperation along three pillars, namely customs to customs, customs to business and customs to other government agencies, and makes advance electronic information and authorized economic operator status the basis of differentiated treatment (WCO, 2021). The Customs Risk Management Compendium describes the organizational conditions of selectivity, including a risk management unit, feedback from inspection results and performance measurement (WCO, 2011). The modernization literature of the World Bank adds that selectivity, post clearance audit and integrity reform must be designed together, because each weakens the others when introduced alone (De Wulf & Sokol, 2005). Integrated compliance management extends this logic by connecting risk assessment with a range of responses that includes education, procedural adjustment, facilitation and enforcement (Widdowson, 2020).

Three outcome domains require operational definitions with measurable indicators. Fiscal effectiveness concerns the lawful revenue protected by controls, security effectiveness concerns the interruption of prohibited or restricted movements within customs responsibilities and facilitation concerns the time, predictability and administrative burden imposed on legitimate movements (Pérez Azcárraga et al., 2022; WCO, 2024). Analytical selection performance constitutes a fourth, intermediate domain, because a predictive ranking, a recorded adjustment

and a realized collection occupy different positions in the fiscal process, just as an alert and a protective intervention describe different security achievements (Duhaut, 2023). Table 1 presents the definitions and indicators retained for the synthesis. The indicators of the Moroccan administration are listed alongside the research indicators to prepare the discussion of transfer conditions.

Table 1: Operational definitions and indicators of the outcome domains

Domain	Operational definition	Research indicators in the corpus	Indicators reported by Moroccan customs
Fiscal effectiveness	Lawful duties and taxes protected or recovered through selection, verification and recovery	Estimated evasion losses, additional assessments, counterfactual revenue, aggregate revenue trends	Revenue from controls, duties detected by targeted verification, recovery and fines, annual customs revenue
Security effectiveness	Interruption of prohibited, restricted or strategic movements within the customs mandate	Seizure counts and weights, held shipments, detection of strategic goods, convicted misconduct cases	Seizures by product, traveller control cases, fraud notices issued by the clearance system
Trade facilitation	Time, predictability and cost imposed on legitimate movements by customs procedures	Reported release experience, clearance intervals, port bottlenecks, operator perceptions	Average import clearance time, share of declarations released within four hours, number of declarations
Analytical selection performance	Capacity of a selection method to rank declarations by fraud likelihood or revenue at risk under an inspection budget	Precision, recall and normalized revenue capture at a fixed inspection share, transfer gains across datasets	Share of declarations subject to targeted verification, number of selectivity rules created and updated

Source: Author, from Duhaut (2023), Pérez Azcárraga et al. (2022), WCO (2024) and ADII (2025).

These definitions carry three consequences for the synthesis. A computational gain in precision concerns analytical selection and says nothing about realized collection until an inspector acts on the ranking and a recovery is recorded. A faster clearance interval is a facilitation outcome whose meaning depends on the reliability of the accompanying controls, since speed can accompany preferential treatment (Chalendard et al., 2023). A seizure total documents enforcement activity, while the wider harm prevented remains an inference that requires evidence about exposure and inspection effort (Tan, 2025). Each finding therefore retains its outcome domain, its unit and its observation period throughout the synthesis.

2.3. Analytical framework and propositions

The analytical framework derives four dimensions from the theories presented above and defines sixteen subcategories that served as the coding framework of the synthesis. Table 2 presents the dimensions, their definitions, their indicators and their theoretical anchoring. Information and analytics corresponds to the resources of the capability, coordination and capabilities corresponds to the routines through which resources are deployed, integrity and accountability corresponds to the agency conditions under which routines operate and differentiated outcomes corresponds to the results that each design can establish.

Five propositions follow from this framework and are assessed in Section 4.7 by the level of evidence available. P1 states that the quality and traceability of source information condition the value of analytical selection, so that benchmark performance obtained on convenient data does not transfer without local validation. P2 states that coordination routines across units and agencies mediate the passage from a risk alert to an administrative action. P3 states that integrity safeguards and professional incentives govern whether analytically selected declarations produce recorded enforcement and revenue, and that their absence can make favourable indicators misleading. P4 states that the same mechanism produces distinct fiscal, security and

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facilitation outcomes, which must be measured separately. P5 states that feedback from inspection results to selection sustains the capability over time and that its interruption degrades targeting. Figure 1 presents the a priori framework in which the propositions are located.

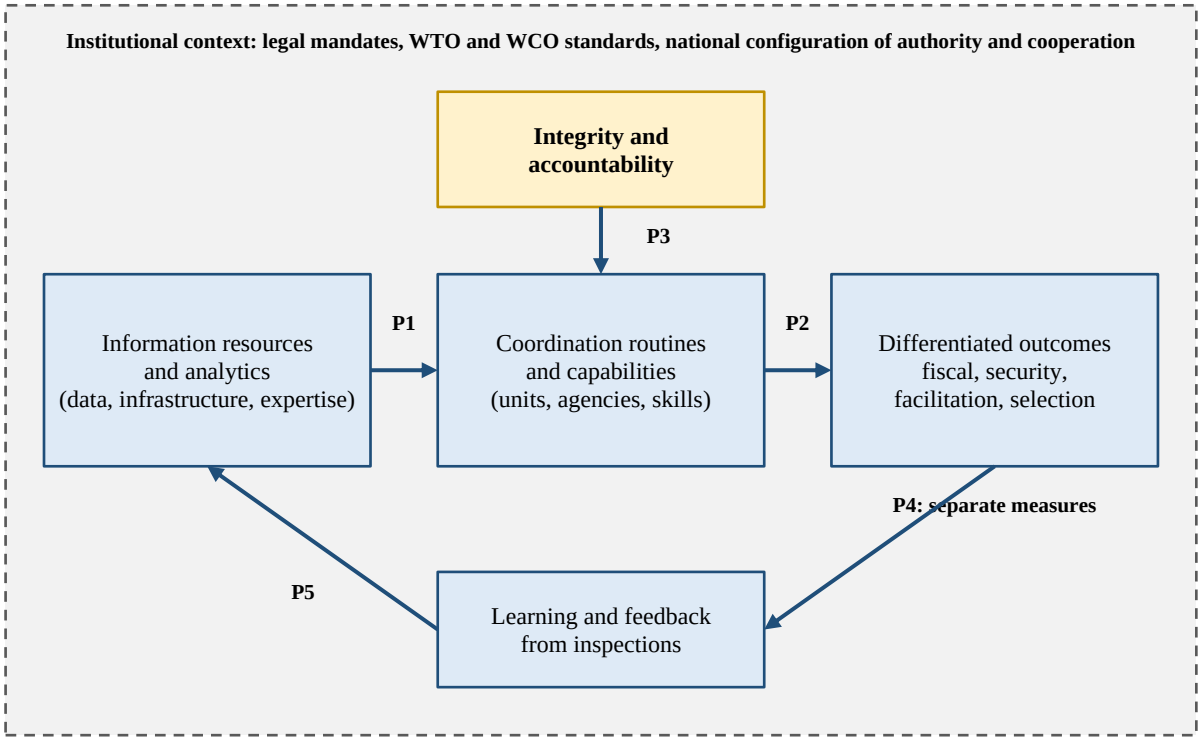
Table 2: Analytical framework, coding categories and theoretical anchoring

Dimension	Definition	Coding subcategories	Indicators used in extraction	Theoretical anchoring
Information and analytics	Data, infrastructure and expertise that transform declarations into credible evidence and risk assessments	Source information and traceability; algorithmic scoring and anomaly detection; inspection feedback and profile renewal; protected data and knowledge collaboration	Data origin and quality, selection method, use of inspection results, data sharing arrangements	Resource based view (Barney, 1991); analytics capability (Mikalef et al., 2020); data governance (Janssen et al., 2020)
Coordination and capabilities	Routines that convert a risk signal into an authorized and proportionate administrative response	Interagency and international coordination; customs to business cooperation; local adaptation and authority alignment; specialist skills and personnel continuity	Responsibilities, interfaces between units and agencies, training, staff retention, local discretion	Dynamic capabilities (Teece, 2007); public sector capabilities (Pablo et al., 2007; Piening, 2013); SAFE pillars (WCO, 2021)
Integrity and accountability	Conditions under which officials with access to information and authority act in accordance with the mandate	Discretion, allocation and collusion; formal transparency and reporting systems; informal norms and reporting behaviour; incentives, leadership and performance accountability	Allocation procedures, reporting channels, detected misconduct, performance contracts	Agency theory of corruption (Klitgaard, 1988); customs corruption evidence (Chalendard et al., 2023; Sequeira & Djankov, 2014)
Differentiated outcomes	Results that a design can establish within a defined population and period	Fiscal revenue and revenue capture; clearance, costs and facilitation; security and strategic goods control; selection shares and predictive metrics	Outcome definition, comparator, unit, period, counterfactual	Performance measurement (WCO, 2024); government analytics (Duhaut, 2023); neo-institutional distinction between arrangement and effect (DiMaggio & Powell, 1983)

Source: Author.

The framework is explanatory rather than predictive. It specifies which relationships the corpus should document and which designs can establish each of them. Its heuristic function is to organize the extraction, to prevent the confusion of evidence levels and to make visible the links for which no evaluated evidence exists. The revised version presented in Section 5.1 records, for each link, the grade of evidence found and the conditions under which the link was observed.

Figure 1: A priori conceptual framework of integrated customs risk management capability



Source: Author.

3. Methodology

3.1. Review design, questions and protocol

The study follows the methodology of a structured scoping review, which maps the available evidence on a question, identifies the designs used and locates gaps without claiming exhaustive coverage of all indexed literature (Arksey & O'Malley, 2005; Levac et al., 2010). The reporting follows the PRISMA extension for scoping reviews (Tricco et al., 2018). The design also borrows from rapid review methods, which accept a single screener whose decisions are verified when resources preclude dual independent screening (Garritty et al., 2021). In the management literature, this type of review belongs to the evidence informed tradition that requires transparent search, explicit criteria and appraisal of the evidence behind each claim (Snyder, 2019; Tranfield et al., 2003). The term systematic review used in the first version of this article has been abandoned, because retrieval relied on general web search services rather than indexed bibliographic databases, screening was not performed by two independent human reviewers and the protocol was not registered before the search (Gusenbauer & Haddaway, 2020; Page et al., 2021).

The three questions stated in the introduction define the scope. RQ1 concerns mechanisms, RQ2 concerns evaluated outcomes and their strength of evidence and RQ3 concerns transfer conditions for Morocco. The unit of analysis is the distinct research contribution represented by an eligible full report, with related reports of the same investigation linked to one contribution (Page et al., 2021).

3.2. Eligibility criteria

Eligibility covered English or French research published from 1 January 2020 to 18 October 2026 concerning customs administrations or inspection processes, with a substantive analytical contribution on at least one mechanism or outcome of the framework. Table 3 presents the criteria and the rule applied to borderline formats. A report from an institutional source was

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eligible when it reported an original investigation with identifiable methods, such as field missions, case analysis or data analysis, and it was excluded as guidance when it presented standards, procedures or recommendations without an investigation. This rule explains the inclusion of the diagnostic missions in Haiti, of the retrospective case study of convicted employees and of analytical chapters of World Bank handbooks, and the exclusion of operational manuals and compendia, which are used in Section 2 as normative background (Cantens et al., 2024; Duhaut, 2023; U.S. Customs and Border Protection, 2023).

Table 3: Eligibility criteria and treatment of borderline formats

Criterion	Applied rule	Justification
Period	1 January 2020 to 18 October 2026	Post dates the entry into force of the Agreement on Trade Facilitation and the 2018 revision of the SAFE Framework, and covers the acceleration of digital clearance; foundational earlier works enter the theoretical framework, not the corpus
Language	English or French full text	Languages of the World Customs Journal, of World Bank research and of Moroccan management journals; Arabic language research was outside the reach of the web streams and its absence is discussed as a limitation
Substantive scope	Customs risk selection, compliance, information quality or exchange, analytics, coordination, integrity or learning	Direct relevance to the dimensions of Table 2
Research types	Empirical, computational, conceptual and secondary research with identifiable method	Distinct evidence roles retained through the evidence grade
Eligible formats	Journal articles, working papers, full conference papers, research preprints, analytical book chapters, institutional reports presenting an original investigation	Coverage of the dissemination channels of customs research
Excluded formats	Standards, compendia, operational manuals, general webpages, news, doctoral theses, unverifiable publications	Guidance documents report no investigation; theses were not retrievable in full text through the web streams and their findings usually appear in derived articles
Versions	Repeated retrievals reconciled; preprint and published versions linked; published version cited where available	One unit of synthesis per investigation
Contextual material	Organizational theory, normative instruments and Moroccan institutional reports used for interpretation only	Separation between selected evidence and background

Source: Author.

The time window emphasizes contemporary arrangements. The earlier economic studies of evasion and corruption and the handbook of customs modernization inform the theoretical framework and the discussion, but they were not retrieved as corpus candidates (De Wulf & Sokol, 2005; Fisman & Wei, 2004; Sequeira & Djankov, 2014). This separation preserves the identity of the systematically selected corpus and makes explicit that the review describes research published since 2020. The exclusion of Arabic and of theses reduces coverage of Moroccan work, and Section 5.4 returns to this consequence.

3.3. Information sources and search strategy

Retrieval used general web search services accessed through an application programming interface, with domain qualifiers for the World Customs Journal and World Bank repositories, an unrestricted scholarly stream and a French language stream on Morocco. Scopus and Web of Science were outside the access environment available to the author, and this absence is the

main reason for the requalification of the review. General web search services return finite, ranked and changing result sets, which makes exact reproduction impossible and biases coverage toward well indexed sources (Gusenbauer & Haddaway, 2020). Two mitigations were adopted. Every returned record was retained in the register with its query, date, rank and decision, and exact title searches verified the identity, version and full text of each candidate. Table 4 reports the strategy in the format recommended by PRISMA-S (Rethlefsen et al., 2021). Sixteen queries were planned and thirteen repair queries were added when domain filtered calls returned unrelated material or empty responses. The repair first introduced explicit site qualifiers and then repeated the topic searches through the alternative search system with quoted customs terminology. Original and corrected responses remained in the register, which distinguishes retrieval design from operational execution (Rethlefsen & Page, 2022). The exact strings, the search system of each call, the number of results and the rank of each retained record are reported in Supplement S1. The streams explain the composition of the corpus, in which the World Customs Journal provides seventeen of the 32 contributions, and this concentration is treated as a limitation of coverage rather than as a property of the field.

3.4. Selection, artificial intelligence assistance and human verification

Selection progressed from titles and available descriptions to the retrieval and assessment of potentially eligible full reports. Canonical addresses, identifiers and publication relationships supported the reconciliation of duplicates and the linkage of preprint and published versions, and the published version was used for extraction where it existed. The register distinguishes records, reports and investigations and assigns one principal exclusion reason to each excluded report (Page et al., 2021). Table 5 specifies the tasks performed with the assistance of a large language model, the parameters recorded for that assistance and the human control applied to each task. Automated screening by large language models reaches variable sensitivity across topics and document types, and its errors concentrate in borderline records, which is why every screening decision was verified by the author rather than delegated to the model (Khraisha et al., 2024).

Table 5: Tasks assisted by the large language model workflow and human control

Task	Role of the model	Parameters recorded	Human control
Query execution and capture	Issued the planned and repair queries, captured returned records	Query string, search system, date, rank	Author designed the query families and validated each repair
Deduplication and version linkage	Proposed duplicate and version matches on identifiers and titles	Matching rule, canonical address	Author confirmed every merge
Title and description screening	Proposed include, exclude or uncertain with a reason	Eligibility criteria of Table 3	Author re-examined all 296 screening decisions against the criteria of Table 3 and decided every uncertain record
Full text retrieval and assessment	Located full texts and proposed eligibility with the principal exclusion reason	Access route, version	Author read every full report assessed (39) and decided inclusion
Extraction	Drafted extraction records with evidence locators	Fields of Section 3.5	Author checked every record against the source
Coding proposals	Proposed subcategory assignments	Codebook of Table 2	Author coded all 32 contributions in NVivo and compared with proposals
Manuscript drafting	Proposed formulations from the extraction records	None	Author rewrote, verified every citation and assumes full responsibility for the content

Source: Author. Model: Claude (Anthropic), accessed through the claude.ai interface, October 2026.

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Verification of screening decisions covered the whole set of records rather than a sample. The author re-examined each of the 296 screened records against the eligibility criteria of Table 3, independently of the decision proposed by the model, and recorded the final decision in the register next to the proposal and its reason. Every record on which the author and the model diverged, and every record that the model had marked as uncertain, was retained for full text retrieval, so that disagreement at the title stage was always resolved in favour of inclusion and settled on the full report. The register therefore documents, for each record, the proposal of the model, the decision of the author and the principal reason for exclusion, and it lists the seven reports excluded after full text assessment with their principal reason (Supplement S1).

3.5. Data extraction and critical appraisal

Extraction recorded bibliographic identity, setting, design, data or sample, mechanism, outcome, finding, limitation and evidence locator for each contribution. Numerical findings retained their units, comparators and subgroup scope, and omitted information remained explicitly unspecified. Critical appraisal used five domains, namely alignment between question and design, data transparency, analytical transparency, validity threats and applicability to Morocco. Each domain received one of three levels, high, moderate or low, according to the criteria of Table 6. The criteria adapt recognized instruments to the heterogeneity of the corpus. Qualitative cases were assessed with the questions of the CASP and JBI checklists on sampling, data collection and reflexivity, mixed designs with the Mixed Methods Appraisal Tool, grey literature with the AACODS criteria of authority, accuracy, coverage, objectivity, date and significance and the econometric study with the logic of confounding and selection used in ROBINS-I (Hong et al., 2018; Tyndall, 2010). No aggregate score was computed, because the designs are incommensurable and a score would conceal which domain limits each claim (Gough, 2021).

Table 6: Appraisal criteria and evidence grading scale

Domain or grade	High or strong	Moderate	Low or weak
Question and design alignment	Design can answer the question asked of the contribution in this review	Design answers part of the question or a proxy question	Design describes or proposes without testing
Data transparency	Data sources, sample and period fully reported, data public or described in detail	Partial reporting, anonymized or restricted data	Sources unreported or unverifiable
Analytical transparency	Methods reproducible from the report or shared code	Methods described without full parameters	Methods implicit
Validity threats	Counterfactual or comparison addressed, selection and confounding discussed	Threats acknowledged but not addressed	Threats unaddressed or evidence from interested parties
Applicability to Morocco	Moroccan setting or comparable middle income administration with similar mandate	Transferable mechanism with contextual conditions stated	Setting or data specific, conditions unstated
Evidence grade of a finding	Strong: causal identification in administrative data with an explicit counterfactual	Moderate: systematic empirical evidence with transparent data and analysis, limited to benchmarks, single sites or cross-sectional associations	Weak: descriptive, documentary or conceptual evidence, or evidence produced by parties with commercial interests

Source: Author, adapted from Gough (2021), Hong et al. (2018) and Tyndall (2010).

3.6. Synthesis method

The synthesis followed the four elements of narrative synthesis, namely the development of a theory of how the mechanisms work, a preliminary synthesis of each contribution, the exploration of relationships within and between contributions and the assessment of the

robustness of the synthesis (Popay et al., 2006). The theory corresponds to the framework and propositions of Section 2.3. The preliminary synthesis consisted of the extraction records and of the appraisal of Table 8. The exploration of relationships used thematic coding in NVivo with a codebook derived a priori from Table 2, comprising four parent categories and sixteen subcategories (Thomas & Harden, 2008). Coding was binary at the level of the contribution, so that each contribution was assigned to a subcategory when at least one extracted finding concerned it. The author coded all 32 contributions and compared the result with the subcategory proposals of the model workflow, retaining the author's decision in case of divergence. Parent counts are unions, which means that a contribution counts once in a parent category whatever the number of its subcategories, while subcategory counts retain multiple roles. The robustness assessment consisted of the evidence grading of each link between a mechanism and an outcome, presented in the evidence matrix of Table 11, and of the confrontation of each proposition with the available grades.

The descriptive bibliometric outputs of the first version, which represented authorship timelines, local citations, keyword cooccurrence and fractional flows, were withdrawn from the manuscript. With 32 contributions, 26 keyword lists and fifteen local citation links, these outputs described publisher metadata rather than the structure of a field, and they answered none of the three questions. The underlying matrices remain available in Supplement S2. Statistical pooling was outside the synthesis because tasks, designs and outcome definitions differ, and the applicable principles of synthesis without meta-analysis informed the grouping and the reporting of evaluated effects (Campbell et al., 2020).

4. Results

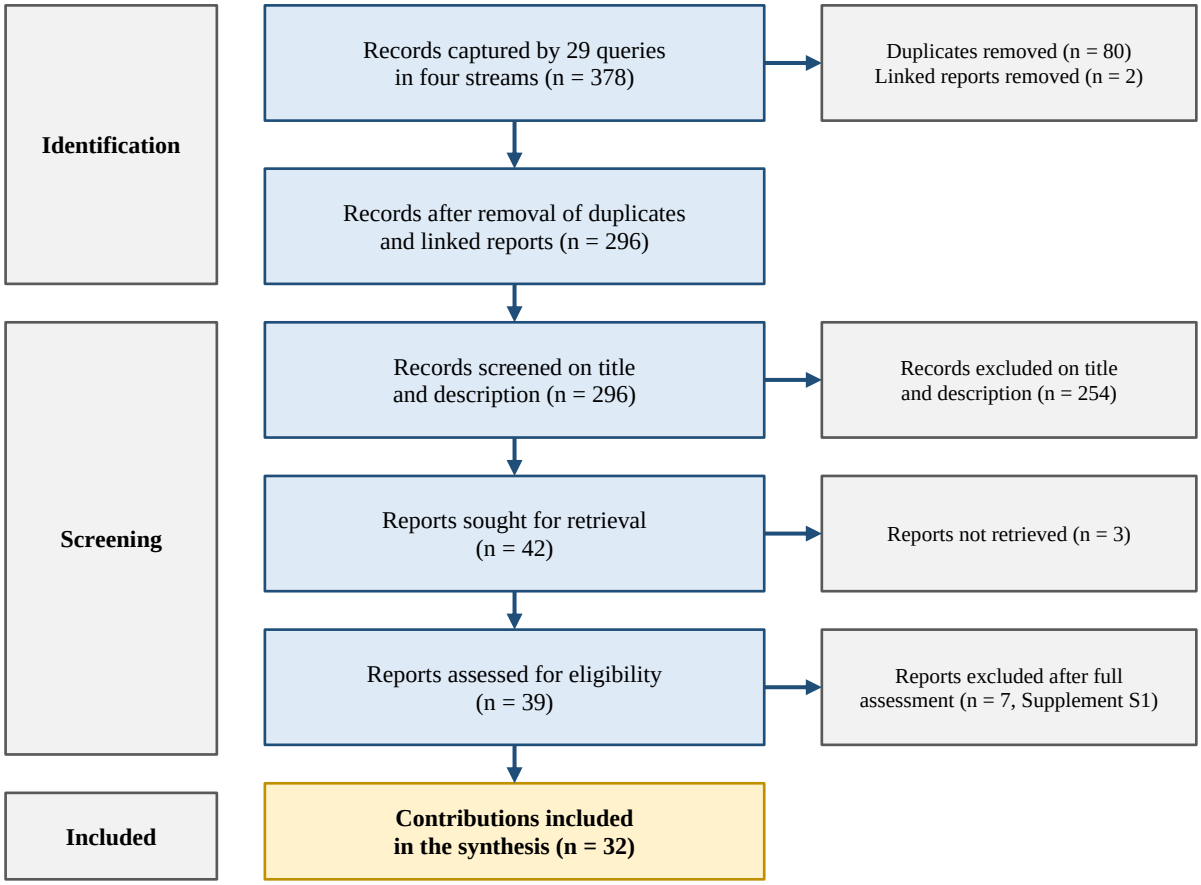
4.1. Selection flow and characteristics of the corpus

The 29 discovery calls captured 378 records across the four streams. Reconciliation removed 80 duplicate retrievals and two linked alternative reports, leaving 296 records for screening, of which 254 were excluded on titles and descriptions. The remaining 42 reports were sought, three could not be retrieved and 39 underwent full assessment, producing seven exclusions, listed with their principal reason in Supplement S1, and 32 included contributions. Figure 2 presents this flow in the format of the PRISMA 2020 diagram, with the counts that the register documents at each stage (Page et al., 2021).

Table 7 summarizes the 32 contributions by setting, design and evidential scope, with the evidence grade assigned in the appraisal. By design, the corpus comprises two administrative econometric analyses, five computational evaluations, one cross-sectional survey, five interview or archive based cases, seven documentary or diagnostic cases, three technical or architectural proposals, eight conceptual or analytical contributions and one secondary review. By source, the World Customs Journal provides seventeen contributions, World Bank publications four, arXiv preprints three, of which one has since been published, the submitting journal two and six other outlets one each. By setting, Morocco appears in four contributions, Cambodia in three, Indonesia and the Philippines in two each and the computational studies use anonymized or synthetic data from Korea and from African administrations. This composition supports a comparison of mechanisms whose analytical value depends on preserving the research design behind each finding (Gough, 2021).

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Figure 2: Selection flow of the review



Source: Author, from the search and screening register (Supplement S1).

Table 7: Characteristics, evidential scope and evidence grade of the included contributions

Contribution	Setting and design	Evidence scope and principal limitation	Grade
Fjeldstad et al. (2020)	Comparative analytical chapter	Integrity incentives and reform conditions; selective historical illustrations	Weak
Heijmann et al. (2020)	Netherlands; practice synthesis	Alignment of customs with supply chain information; conceptual and institutional reasoning	Weak
Hong (2020)	Cambodia; documentary gap analysis	Risk systems, staffing and feedback; prospective programme logic	Weak
Nelson (2020)	Strategic goods; methodological proposal	Machine learning architecture; illustrative theoretical exercise	Weak
Widdowson (2020)	Cross-context conceptual framework	Integrated risk and compliance treatment; proposed explanatory relationships	Weak
Zhou et al. (2021)	China; exploratory case, 12 interviewees	Voluntary data sharing and participant benefits; regional pilots and self-reports	Moderate
Kusumawardhani & Puno Diokno (2022)	Indonesia and Philippines; practitioner comparison	Integrated integrity arrangements; descriptive professional experience	Weak
Park et al. (2022)	Four anonymized countries; computational study	Domain transfer benchmarks; simulated label scarcity and local compatibility	Moderate
Tan (2022)	Cambodia; port documentary analysis	Clearance interfaces and feedback gaps; one operational setting	Weak

Contribution	Setting and design	Evidence scope and principal limitation	Grade
Boutabratine (2023)	Morocco; documentary and conceptual analysis	Inspection granularity and risk feedback; weak traceability of comparative claims	Weak
Chalendard et al. (2023)	Madagascar; administrative econometric study	Inspector allocation and enforcement; local identification and counterfactual assumptions	Strong
Duhaut (2023)	Cross-country analytical chapter	Performance measurement and data boundaries; secondary illustrations	Weak
Jeong et al. (2023)	Korea; synthetic data benchmark, 54,000 records	Public benchmarking and source data comparison; incomplete synthetic fidelity	Moderate
Kim et al. (2023)	Three African countries; retrospective simulations	Exploration and inspection learning; simulated capture rather than realized collection	Moderate
Mavlonov (2023)	Uzbekistan; documentary procedural case	Digital controls and corruption opportunities; hypothetical opportunity count	Weak
Puno Diokno (2023)	Philippines; legal and operational case	Strategic trade coordination; illustrative incident and practitioner observation	Weak
Singh et al. (2023)	Three countries; computational study, published version	Graph learning under label scarcity; dataset heterogeneity and version specific results	Moderate
U.S. Customs and Border Protection (2023)	United States; retrospective convicted case study	Misconduct mechanisms; selected detected cases and restricted population inference	Moderate
Cantens et al. (2024)	Haiti; three diagnostic field missions	Inspection feasibility and institutional constraints; restricted administrative data	Moderate
Dafir & Imarhane (2024)	Morocco; conceptual analysis	Risk orientation and proposed information technologies; limited empirical traceability	Weak
Dominguez Prost & Scattolo (2024)	Argentina; observational econometric analysis	Tariff dispersion and inspection allocation; selection outcome rather than detected fraud	Moderate
Karklina-Admine et al. (2024)	Cross-country literature review	Themes in customs risk management; secondary synthesis kept separate	Moderate
Morini et al. (2024)	Brazil; qualitative reform case, 11 interviews	Platform participation and advance information; convenience sample and concurrent reform	Moderate
Wibiastika & Darma (2024)	Indonesia; case study, 16 officers	Integrity culture and reporting expectations; purposive sample at one office	Moderate
Bersin et al. (2025)	Conceptual federated learning analysis	Proposed information architecture; hypothetical illustration and vendor interests	Weak
Ramli (2025)	Global aluminium trade; exploratory preprint	Unsupervised anomaly screening; weak sample reporting and infringement verification	Weak
Tan (2025)	Cambodia; documentary programme case	Seizures, training and continuity; descriptive enforcement activity	Weak
Vijayakumar (2025)	Conceptual synthesis and implementation examples	Technology and supply chain security; heterogeneous descriptive evidence	Weak
Antov et al. (2026)	Bulgaria and European Union; survey of 504 officers and legal analysis	Reform perceptions; cross-sectional associations	Moderate
Attaoui (2026)	Morocco; mixed descriptive case	Interviews and annual trends; six clearance and ten revenue observations	Weak
Outram & Swartz (2026)	Conceptual analysis and system demonstrations	AI supported border management; undisclosed samples and commercial interests	Weak
Sabri & Mouhacine (2026)	Six countries including Morocco; documentary comparison	Institutional adaptation; heterogeneous indicators and incomplete source traceability	Weak

Source : Author.

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4.2. Critical appraisal of the contributions

Table 8: Critical appraisal matrix of the 32 contributions

Contribution	Question and design alignment	Data transparency	Analytical transparency	Validity threats addressed	Applicability to Morocco	Grade
Fjeldstad et al. (2020)	Moderate	Low	Moderate	Low	Moderate	Weak
Heijmann et al. (2020)	Moderate	Low	Low	Low	Moderate	Weak
Hong (2020)	High	Moderate	Moderate	Low	High	Weak
Nelson (2020)	Moderate	Low	Moderate	Low	Low	Weak
Widdowson (2020)	High	Low	Moderate	Low	High	Weak
Zhou et al. (2021)	High	Moderate	Moderate	Low	Moderate	Moderate
Kusumawardhani & Puno Diokno (2022)	Moderate	Low	Low	Low	Moderate	Weak
Park et al. (2022)	High	Moderate	High	Moderate	Moderate	Moderate
Tan (2022)	High	Moderate	Moderate	Low	High	Weak
Boutabratine (2023)	Moderate	Low	Low	Low	High	Weak
Chalendard et al. (2023)	High	High	High	High	Moderate	Strong
Duhaut (2023)	High	Moderate	Moderate	Moderate	High	Weak
Jeong et al. (2023)	High	High	High	Moderate	Low	Moderate
Kim et al. (2023)	High	Moderate	High	Moderate	Moderate	Moderate
Mavlonov (2023)	Moderate	Low	Low	Low	Moderate	Weak
Puno Diokno (2023)	High	Low	Moderate	Low	Moderate	Weak
Singh et al. (2023)	High	Moderate	High	Moderate	Moderate	Moderate
U.S. Customs and Border Protection (2023)	High	Moderate	Moderate	Low	Low	Moderate
Cantens et al. (2024)	High	Moderate	Moderate	Low	Moderate	Moderate
Dafir & Imarhane (2024)	Moderate	Low	Low	Low	High	Weak
Dominguez Prost & Scattolo (2024)	High	Moderate	High	Moderate	Moderate	Moderate
Karklina-Admine et al. (2024)	High	Moderate	Moderate	Moderate	Moderate	Moderate
Morini et al. (2024)	High	Moderate	Moderate	Low	Moderate	Moderate
Wibiastika & Darma (2024)	High	Moderate	Moderate	Low	Moderate	Moderate
Bersin et al. (2025)	Low	Low	Low	Low	Low	Weak
Ramli (2025)	Moderate	Low	Moderate	Low	Low	Weak
Tan (2025)	High	Moderate	Low	Low	High	Weak
Vijayakumar (2025)	Moderate	Low	Low	Low	Moderate	Weak
Antov et al. (2026)	High	Moderate	Moderate	Moderate	Moderate	Moderate
Attaoui (2026)	Moderate	Moderate	Low	Low	High	Weak
Outram & Swartz (2026)	Low	Low	Low	Low	Low	Weak
Sabri & Mouhacine (2026)	Moderate	Low	Low	Low	High	Weak

Source: Author, criteria of Table 6.

Table 8 reports the appraisal of each contribution on the five domains with the resulting evidence grade. One contribution receives a strong grade, the econometric study of inspector allocation in Madagascar, which combines administrative data, an explicit counterfactual and a documented behavioural response to a procedural change (Chalendard et al., 2023). Twelve contributions receive a moderate grade. They comprise the four computational evaluations with transparent data and methods, the observational analysis of red lane classification in Argentina, the officer survey in Bulgaria, the three interview based cases, the archival study of convicted employees, the diagnostic missions in Haiti and the secondary review (Antov et al., 2026;

Cantens et al., 2024; Dominguez Prost & Scattolo, 2024; Jeong et al., 2023; Karklina-Admine et al., 2024; Kim et al., 2023; Morini et al., 2024; Park et al., 2022; Singh et al., 2023; U.S. Customs and Border Protection, 2023; Wibiastika & Darma, 2024; Zhou et al., 2021). Nineteen contributions receive a weak grade because they describe arrangements, propose architectures or interpret documents without an investigation that could establish an effect, and two of them originate from authors with commercial interests in the technologies described (Bersin et al., 2025; Outram & Swartz, 2026).

Two patterns in Table 8 shape the interpretation of the results. Applicability to Morocco is rated high mainly for contributions whose evidence is weak, namely the Moroccan documentary studies and the Cambodian policy analyses, whereas the contributions with moderate or strong evidence concern settings or data whose transfer requires stated conditions. Validity threats are addressed in only eight contributions. The synthesis therefore reads the Moroccan and documentary contributions as sources of mechanisms and questions, and the computational and econometric contributions as sources of evaluated relationships whose conditions of transfer must be made explicit.

4.3. Thematic coverage of the corpus

Table 9 reports the frequency with which the 32 contributions address each category of the framework. Parent counts are unions of contributions, so that the four parent categories total 71 assignments, and the sixteen subcategories total 111 assignments because a contribution can address several subcategories within one parent. Coverage is highest for differentiated outcomes, with 24 contributions, and for coordination and capabilities, with 20 contributions, while integrity and accountability is addressed by eight contributions. Within information and analytics, source information and traceability and algorithmic scoring are each addressed by nine contributions, whereas inspection feedback and profile renewal is addressed by five and protected data collaboration by four. Within differentiated outcomes, clearance and facilitation appears in fourteen contributions and fiscal revenue in thirteen, while security control appears in six and predictive metrics in seven. These frequencies describe coverage and carry no information on evidence strength, which Table 11 supplies.

Table 9: Thematic coding frequencies of the 32 contributions

Parent category (union of contributions)	Subcategory	Contributions
Information and analytics (19)	Source information and traceability	9
	Algorithmic scoring and anomaly detection	9
	Inspection feedback and profile renewal	5
	Protected data and knowledge collaboration	4
Coordination and capabilities (20)	Interagency and international coordination	9
	Customs to business cooperation	6
	Local adaptation and authority alignment	6
	Specialist skills and personnel continuity	9
Integrity and accountability (8)	Discretion, allocation and collusion	5
	Formal transparency and reporting systems	3
	Informal norms and reporting behaviour	3
	Incentives, leadership and performance accountability	3
Differentiated outcomes (24)	Fiscal revenue and revenue capture	13
	Clearance, costs and facilitation	14
	Security and strategic goods control	6
	Selection shares and predictive metrics	7
Total	Parent assignments 71; subcategory assignments 111	

Source: Author, coding output NVivo.

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4.4. RQ1: Information quality, analytical selection and learning

Information quality begins with relationships through which declarations become credible evidence, linking selection to incentives for sharing and verifying records (Zhou et al., 2021). In the Chinese traceability case, upstream information connects producers, traders, customs officials and consumers, while reciprocal benefits encourage participation (Zhou et al., 2021). Interviews and observations illuminate this mechanism, with reported improvements in visibility and release speed grounded in participants' experience of regional pilots (Zhou et al., 2021). The Dutch practice synthesis reaches a compatible conclusion by arguing that customs should align with the information already produced in supply chains rather than collect parallel declarations, although its reasoning is conceptual and institutional (Heijmann et al., 2020). The Brazilian reform case documents how a compliance platform for cross-border electronic commerce induced marketplaces to supply advance information, with eleven interviewees reporting faster treatment of compliant flows during a concurrent reform that prevents attribution (Morini et al., 2024). The present review therefore interprets traceability as an organizational condition for useful analytics, whereas synthetic benchmarking evaluates the statistical behaviour of information after its administrative production (Jeong et al., 2023; Zhou et al., 2021).

From this perspective, distinguishing credible records from convenient datasets matters when confidentiality shapes research access, since synthetic declarations preserve selected relationships through transformation (Jeong et al., 2023). The Korean benchmark contains 54,000 generated declarations derived from inspected administrative records, allowing algorithm comparisons while preserving separation between public and confidential observations (Jeong et al., 2023). LightGBM precision among the highest ranked five percent differs substantially between synthetic and source data, reaching 0.7783 and 0.5313 respectively (Jeong et al., 2023). Consequently, benchmark success supports comparative experimentation, while operational adoption requires validation against local declarations and inspection practices (Jeong et al., 2023). Cross-country learning extends this validation problem from data generation to differences between administrations (Park et al., 2022).

International knowledge sharing introduces a tension between reusable customs categories and locally specific relationships between traders, commodities and fraud, making adaptation central (Park et al., 2022). Prototype transfer across four anonymized countries improves retrospective revenue capture under simulated label scarcity, with gains ranging from 2.1 to 11.7 times the target-only benchmark (Park et al., 2022). Simpler transfer occasionally reduces performance, suggesting that compatibility and calibration shape the value of pooled knowledge more strongly than information volume alone (Park et al., 2022). These comparisons establish computational potential under experimental conditions, while practical implementation introduces questions about identifiers, lawful exchange and administrative capacity (Park et al., 2022). Two conceptual contributions propose architectures for such exchange. Federated learning would allow administrations and supply chain actors to train shared models without pooling raw data, and artificial intelligence systems would support border management at strategic level, but both contributions illustrate their proposals with hypothetical cases or undisclosed demonstrations and are authored by parties with commercial interests, which places them at the level of proposals rather than evidence (Bersin et al., 2025; Outram & Swartz, 2026).

Relational structure offers a response to scarce inspection labels by connecting transactions through importer identifiers and commodity codes, allowing observed patterns to inform related declarations (Singh et al., 2023). In the GraphFC study, recall for one dataset rises from 0.115 to 0.405 at a five percent inspection budget, whereas another dataset records 0.118 against a baseline of 0.129 (Singh et al., 2023). This variation qualifies broad superiority claims and

directs attention toward graph construction, local trading structures and the experimental masking of labels (Singh et al., 2023). Read alongside active-learning evidence, the results suggest that representation quality and continued acquisition of informative inspection outcomes address complementary stages of the targeting process (Kim et al., 2023; Singh et al., 2023). Table 10 reports the computational comparisons with their experimental conditions. The metrics are not comparable across studies, because datasets, inspection budgets, label availability and target definitions differ, and the table is read as a set of within-study comparisons.

Table 10: Computational comparisons and their experimental conditions

Study and measure	Dataset and period	Inspection budget and labels	Reported comparison	Scope of inference
Jeong et al. (2023); precision at 5 percent	Korean import declarations, 54,000 synthetic records generated from inspected source records	Top 5 percent ranked; full labels on source data	LightGBM: 0.7783 on synthetic data against 0.5313 on source data	Benchmark fidelity; absolute levels vary across data versions
Park et al. (2022); normalized revenue at 5 percent	Four anonymized administrations, retrospective declarations	5 percent inspection; 1 percent of training labels retained	All source transfer against target only: 2.1 to 11.7 fold	Retrospective transfer; local data compatibility matters
Singh et al. (2023); recall at 5 percent	Three anonymized administrations, retrospective declarations	5 percent inspection; 5 percent of training labels retained	GraphFC against DATE: dataset B 0.405 against 0.115; dataset A 0.118 against 0.129	Performance varies with dataset structure
Kim et al. (2023); normalized revenue capture	Three African administrations, weekly retrospective simulation	10 percent inspection; labels acquired through simulated inspections	Country T: hybrid exploration 0.567 against DATE 0.156; smaller gains elsewhere	Simulated capture, distinct from operational collection

Source : Jeong et al. (2023), Kim et al. (2023), Park et al. (2022) and Singh et al. (2023).

Inspection decisions also influence future knowledge because selection determines which declarations acquire verified labels, creating feedback for learning (Kim et al., 2023). Retrospective weekly simulations across three African countries combine selection by known risk with exploratory inspections of less familiar cases (Kim et al., 2023). At a ten percent inspection budget, normalized revenue capture improves markedly in one country, from 0.156 to 0.567, alongside smaller gains in the other settings (Kim et al., 2023). Such heterogeneity supports locally calibrated exploration and distinguishes simulated revenue capture from observed operational collections (Kim et al., 2023). By comparison, trade-anomaly models generate investigative leads whose evidential value depends on subsequent examination of the flagged transactions (Ramli, 2025).

The heterogeneity visible in Table 10 can be explained by four factors. The datasets differ in the structure of trading relationships, which determines whether a graph representation adds information, as the contrast between the two GraphFC datasets shows (Singh et al., 2023). The inspection budgets and the share of retained labels differ, which changes the difficulty of the task. The target definitions differ, since precision concerns the share of flagged declarations that were fraudulent, recall concerns the share of fraudulent declarations that were flagged and revenue capture weights each case by the duties at stake. The data generation process differs, since synthetic data preserve selected relationships and can inflate performance relative to source data (Jeong et al., 2023). These factors imply that an administration considering transfer must evaluate candidate methods on its own historical declarations and inspection results rather than on published metrics.

In exploratory aluminium-trade analysis using price patterns, networks and unsupervised detection methods, the boundary between an unusual transaction and an established

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infringement becomes visible (Ramli, 2025). Algorithmic attribution identifies variables driving flags, while verification of illicit conduct requires additional evidence about declarations, applicable rules and the circumstances of individual cases (Ramli, 2025). Sparse reporting of sample construction and validation, together with inconsistent median values, places this study's findings within hypothesis generation and exploratory screening (Ramli, 2025). The present synthesis therefore treats its anomalies as provisional leads, while the convicted-case evidence from American border administration demonstrates how corroborated records support more specific descriptions of misconduct mechanisms (Ramli, 2025; U.S. Customs and Border Protection, 2023).

Across these approaches, useful information emerges through processes of production, exchange, interpretation and examination, an interpretation consistent with the conceptual breadth identified in the earlier review (Karklina-Admine et al., 2024). Fiscal capture metrics illuminate one dimension of effectiveness, with security and facilitation requiring their own observable outcomes and appropriate study designs (Karklina-Admine et al., 2024). The answer to RQ1 for this dimension is that information quality and traceability (P1) and inspection feedback (P5) are supported by moderate evidence from benchmarks and interview based cases, and that no contribution evaluates the realized effect of an analytical method on collected revenue in an operating administration.

4.5. RQ1: Coordination, integrity and continuity

Organizational coordination emerges as the process through which customs information becomes an authorized response, connecting risk assessment with legal obligations, procedural choices, trader support and differentiated intervention (Widdowson, 2020). This perspective gives integration an operational meaning, because an assessment can lead to education, procedural adjustment, facilitation or enforcement according to the source and character of the compliance problem (Widdowson, 2020). Its value for the present synthesis lies in specifying relationships among administrative functions, while its conceptual design places effectiveness claims at the level of reasoned propositions requiring empirical assessment (Widdowson, 2020). Accordingly, the organizing question concerns how institutions maintain these connections during work, where responsibilities, information access and professional judgement shape the conversion of identified risk into proportionate administrative action (Widdowson, 2020).

In Cambodia, a policy analysis locates several breaks in this organizational chain, linking separate information systems, manual data entry and restricted frontline contribution to difficulties in maintaining usable risk profiles (Hong, 2020). Its proposed package combines system integration and advance cargo information with competency based staffing and training, thereby treating analytical expertise and routine participation as complementary conditions of operational improvement (Hong, 2020). These relationships derive from documentary gap analysis and a prospective programme logic, which support an explanation of implementation requirements while leaving the magnitude of anticipated fiscal and facilitation gains open (Hong, 2020). A localized analysis at Sihanoukville International Port sharpens this explanation by showing how duplicate paper and electronic reporting, disconnected manifest information and limited exchanges between the risk management office and the container control unit complicate the updating of profiles from inspection experience (Tan, 2022). The study places feedback at the intersection of technical interoperability and working relationships, since usable inspection findings depend on both connected records and cooperation among the officials who interpret them (Tan, 2022).

Interagency coordination presents a related challenge when the expertise needed to evaluate a shipment belongs to several authorities, as illustrated by strategic trade control in the Philippines (Puno Diokno, 2023). The case describes information sharing, technical advice and commodity identification training following an agreement among customs, licensing and

investment promotion authorities, alongside continued fragmentation between declaration systems (Puno Diokno, 2023). One reported incident traces how shared intelligence and coordinated licensing review enabled officials to locate a shipment and hold it pending an authorization decision, illustrating a plausible security mechanism (Puno Diokno, 2023). Its evidential contribution concerns the sequence connecting knowledge to administrative action, with broader effectiveness remaining contingent on how routinely such coordination operates across the wider population of transactions (Puno Diokno, 2023).

Coordination also depends on how reforms are perceived by the officers who must operate them. The survey of 504 Bulgarian customs officers conducted alongside a legal analysis of the European customs reform shows that officers associate the planned data hub and the centralized risk management with expectations of better information, while expressing concern about the redistribution of competences between national administrations and the European level (Antov et al., 2026). The associations are cross-sectional and concern perceptions rather than performance, but they document that local adaptation and authority alignment are conditions perceived by practitioners as decisive for the reform, which supports the subcategory of local adaptation in the framework (Antov et al., 2026). In Uzbekistan, a documentary case argues that the digitalization of customs procedures reduces the number of occasions for discretionary contact between officers and declarants, and it quantifies this reduction through a hypothetical count of opportunities rather than through observed misconduct (Mavlonov, 2023).

Integrity introduces an additional condition because the officials who access information also influence its interpretation and the actions that follow, making accountability part of the operational architecture of integration (Kusumawardhani & Puno Diokno, 2022). The comparative practitioner account describes portals, integrated service counters, electronic tracking and complaint channels as arrangements intended to increase visibility and reduce opportunities for private exchanges (Kusumawardhani & Puno Diokno, 2022). Automated assignment in the Philippine example further connects information systems with the distribution of authority, illustrating how procedural design can address relationships that might otherwise facilitate collusion (Kusumawardhani & Puno Diokno, 2022). These reported arrangements establish institutional intentions and plausible mechanisms, whereas actual reporting practices require closer examination of staff expectations, perceived protection and everyday responses to misconduct (Wibiastika & Darma, 2024).

Precisely that closer view is supplied by the Denpasar case through sixteen purposively selected officers, six months of observation and programme documents, revealing a distinction between visible integrity initiatives and underlying behavioural assumptions (Wibiastika & Darma, 2024). Fifteen interviewees preferred informal advice or reminders when responding to the misconduct scenario, while four expressed fear or hesitation about using formal reporting channels, qualifying the organizational meaning of certification (Wibiastika & Darma, 2024). These findings support a conditional interpretation of accountability infrastructure, since reporting tools acquire practical value through trusted protection and routines that encourage people to use them when problems arise (Wibiastika & Darma, 2024). The single site and purposive sample restrict population inference, although the study offers a concrete explanation of how cultural expectations can shape the operation of established safeguards (Wibiastika & Darma, 2024).

Institutional continuity completes this account because coordination relies on expertise that survives changes in personnel and technology, as the Cambodian passenger and cargo control programme case illustrates (Tan, 2025). Its descriptive record combines seizure activity with discussion of specialist training, international intelligence exchange, manual profiling, data integration difficulties and the loss of experienced officers through staff rotation (Tan, 2025). The seizure totals document operational activity, while the programme analysis identifies retention and organizational learning as conditions for sustaining the capacity to interpret

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intelligence and prioritize inspections over time (Tan, 2025). The answer to RQ1 for this dimension is that coordination mechanisms (P2) are documented by seven descriptive cases and one survey, which establish plausible sequences and perceived conditions, and that no contribution measures the effect of a coordination arrangement on an outcome. Integrity mechanisms (P3) rest on stronger ground, with one strong and three moderate contributions, which is examined with the outcomes in the following section.

4.6. RQ2: Fiscal protection, security and facilitation outcomes

The evidence on outcomes separates the identification of risky transactions from the consequences of administrative intervention for customs objectives (Duhaut, 2023). An infringement, a tax adjustment and a completed recovery represent different events within the enforcement process, and faster passage acquires meaning through the reliability of the accompanying controls and the allocation of delays among participating organizations (Duhaut, 2023; Widdowson, 2020). The included research offers complementary views of performance, ranging from estimated fiscal losses to operational cases and proposed measurement frameworks, and the following paragraphs read each claim within the scope of its underlying observation.

Fiscal protection receives its strongest evidence from the Madagascar investigation, which connects assignment manipulation with inspector behaviour (Chalendard et al., 2023). Declarations handled through excessive broker and inspector interaction exhibited faster clearance alongside weaker recorded enforcement, despite elevated evasion risk (Chalendard et al., 2023). Counterfactual calculations placed losses from the identified scheme at approximately three percent of taxes collected at Toamasina, conditional on the study's valuation assumptions (Chalendard et al., 2023). Delegated randomization initially suppressed the assignment pattern, followed by circumvention through declarations withheld from that procedure (Chalendard et al., 2023). These findings locate fiscal effectiveness within the integrity of allocation and follow through, while revealing how an apparently favourable speed indicator can accompany preferential treatment (Chalendard et al., 2023). The Argentine analysis of red lane classification adds an observational result at the selection stage, since declarations of products with higher tariff dispersion are more likely to be assigned to physical inspection, which indicates that the selectivity system responds to evasion incentives, while the outcome measured is the inspection decision rather than detected fraud (Dominguez Prost & Scattolo, 2024).

Moroccan evidence addresses revenue and facilitation through aggregate analysis, linking annual administrative trends with the accumulation of digitization (Attaoui, 2026). The clearance analysis contains six annual observations, while the revenue analysis contains ten, requiring attention to temporal patterns (Attaoui, 2026). Changes in trade volumes, prices, fiscal rules and pandemic conditions remain plausible contributors to the associations (Attaoui, 2026). The study consequently informs understanding of modernization practices and managerial perceptions, with effect attribution constrained by the aggregate design (Attaoui, 2026). Boutabratine's emphasis on inspection granularity and feedback offers a specific operational explanation to examine within these trends, although its proposed advantages remain conceptual (Boutabratine, 2023).

Security evidence places emphasis on operational activity and specialized coordination. The Cambodian passenger and cargo control programme case reports the number of seizure cases and the quantities seized by the two port control units established under the programme, together with the training received, the profiling methods used and the international exchanges of information (Tan, 2025). These records establish documented enforcement activity, while changing shipment exposure, inspection effort and recording practices remain relevant explanations for variation, and the case supports an organizational account of security work

whose contribution to protection requires evidence extending beyond recorded seizure totals (Tan, 2025). Philippine strategic trade analysis clarifies how security targeting depends on licensing knowledge and access to declarations held across agencies, and its narrated export referral illustrates coordinated assessment leading to a shipment being held and authorization subsequently denied (Puno Diokno, 2023). A related machine learning proposal develops an analytical approach for identifying strategic goods and presents its architecture as a theoretical exercise (Nelson, 2020). Together, these contributions distinguish a demonstrated operational sequence from a technical proposal, assigning each a bounded role in explaining security (Nelson, 2020; Puno Diokno, 2023).

Yet these outcomes depend on context, as the Haitian diagnostic report shows through observations at ports and crossings during severe insecurity (Cantens et al., 2024). Threats to officers, limited equipment and weak cooperation restricted the conditions under which inspections and information exchange could occur (Cantens et al., 2024). Its examination of performance contracts identified self reported indicators and unclear targets, showing how measurement can limit managerial accountability (Cantens et al., 2024). Recommendations concerning scanners consequently incorporate maintenance, access, procedural integration and possible diversion toward alternative entry points (Cantens et al., 2024). These observations explain feasibility conditions rather than quantify intervention benefits, with restricted transaction data and evolving security circumstances limiting outcome verification (Cantens et al., 2024).

Facilitation evidence combines participant experience with documented institutional bottlenecks (Tan, 2022; Zhou et al., 2021). Chinese traceability participants describe greater visibility and easier release, while the regional pilot design situates those accounts within an information partnership (Zhou et al., 2021). Brazilian marketplace representatives describe faster treatment of compliant consignments after the compliance platform, within a reform whose other components changed at the same time (Morini et al., 2024). Cambodian port analysis identifies duplicated entry, legal constraints and weak inspection feedback as connected sources of operational friction (Tan, 2022). The Madagascar study supplies the only evaluated facilitation result, and it is a negative one, since faster clearance accompanied preferential treatment and weaker enforcement (Chalendard et al., 2023). The answer to RQ2 is therefore that fiscal outcomes are evaluated with strong evidence in one setting and with moderate evidence at the selection stage in four computational studies and one observational study, that security outcomes rest on descriptive activity records and that facilitation outcomes rest on reported experience, with one evaluated result that warns against reading speed as success.

4.7. Evidence matrix and assessment of the propositions

Table 11 crosses the mechanisms of the framework with the outcome domains and reports, in each cell, the contributions that document the link and the highest evidence grade among them. Empty cells identify links for which the corpus contains no contribution. The matrix shows that evaluated evidence concentrates in two cells, namely analytical selection methods assessed on predictive metrics and integrity mechanisms assessed on fiscal outcomes, and that security and facilitation outcomes are documented almost exclusively by weak evidence.

The five propositions receive the following assessment. P1, on information quality as a condition of analytical value, is supported by moderate evidence, since the synthetic benchmark shows that performance measured on transformed data differs from performance on source data and since the transfer study shows that compatibility between datasets governs the gains from pooled knowledge (Jeong et al., 2023; Park et al., 2022). P2, on coordination as the mediator between alert and action, is supported by weak evidence only, since the eight contributions that document it describe sequences and perceptions without measuring an outcome. P3, on integrity

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as the condition under which selection produces recorded enforcement, is supported by strong evidence in one setting and by moderate evidence in two others, and it is the only proposition for which a causal effect on revenue has been identified (Chalendard et al., 2023; Dominguez Prost & Scattolo, 2024; U.S. Customs and Border Protection, 2023). P4, on the differentiation of outcomes, is supported by moderate evidence, because the same Madagascar scheme produced a favourable facilitation indicator and an unfavourable fiscal one, and because the computational studies report selection metrics whose relation to collection is not evaluated (Chalendard et al., 2023; Kim et al., 2023). P5, on feedback from inspections as the sustaining mechanism, is supported by moderate evidence from the active learning simulations and by weak evidence from the Cambodian and Moroccan documentary cases (Boutabratine, 2023; Kim et al., 2023; Tan, 2022).

Table 11: Evidence matrix of mechanisms, outcome domains and evidence grades

Mechanism	Fiscal effectiveness	Security effectiveness	Trade facilitation	Analytical selection performance
Source information, traceability and data sharing	Moderate: Jeong et al. (2023)	No contribution	Moderate: Zhou et al. (2021), Morini et al. (2024); Weak: Heijmann et al. (2020)	Moderate: Jeong et al. (2023), Park et al. (2022)
Algorithmic selection and learning from inspections	Moderate (simulated capture): Kim et al. (2023), Park et al. (2022)	Weak: Nelson (2020), Ramli (2025)	No contribution	Moderate: Kim et al. (2023), Park et al. (2022), Singh et al. (2023); Weak: Bersin et al. (2025), Outram & Swartz (2026)
Coordination across units, agencies and borders	Weak: Hong (2020)	Weak: Puno Diokno (2023), Tan (2025), Vijayakumar (2025)	Moderate (perceptions): Antov et al. (2026); Weak: Hong (2020), Tan (2022)	No contribution
Integrity safeguards, allocation and incentives	Strong: Chalendard et al. (2023); Moderate: Dominguez Prost & Scattolo (2024); Weak: Mavlonov (2023), Fjeldstad et al. (2020)	Moderate: U.S. Customs and Border Protection (2023)	Strong (negative): Chalendard et al. (2023)	Moderate: Dominguez Prost & Scattolo (2024)
Specialist skills, continuity and feasibility conditions	Weak: Hong (2020)	Weak: Tan (2025); Moderate (feasibility): Cantens et al. (2024)	Weak: Tan (2022)	No contribution
Moroccan institutional context	Weak: Attaoui (2026), Dafir & Imarhane (2024)	Weak: Sabri & Mouhacine (2026)	Weak: Attaoui (2026), Boutabratine (2023)	Weak: Boutabratine (2023)

Source: Author. Conceptual and secondary contributions (Widdowson, 2020; Duhaut, 2023; Karklina-Admine et al., 2024; Kusumawardhani & Puno Diokno, 2022; Wibiastika & Darma, 2024) inform several cells and are discussed in the text.

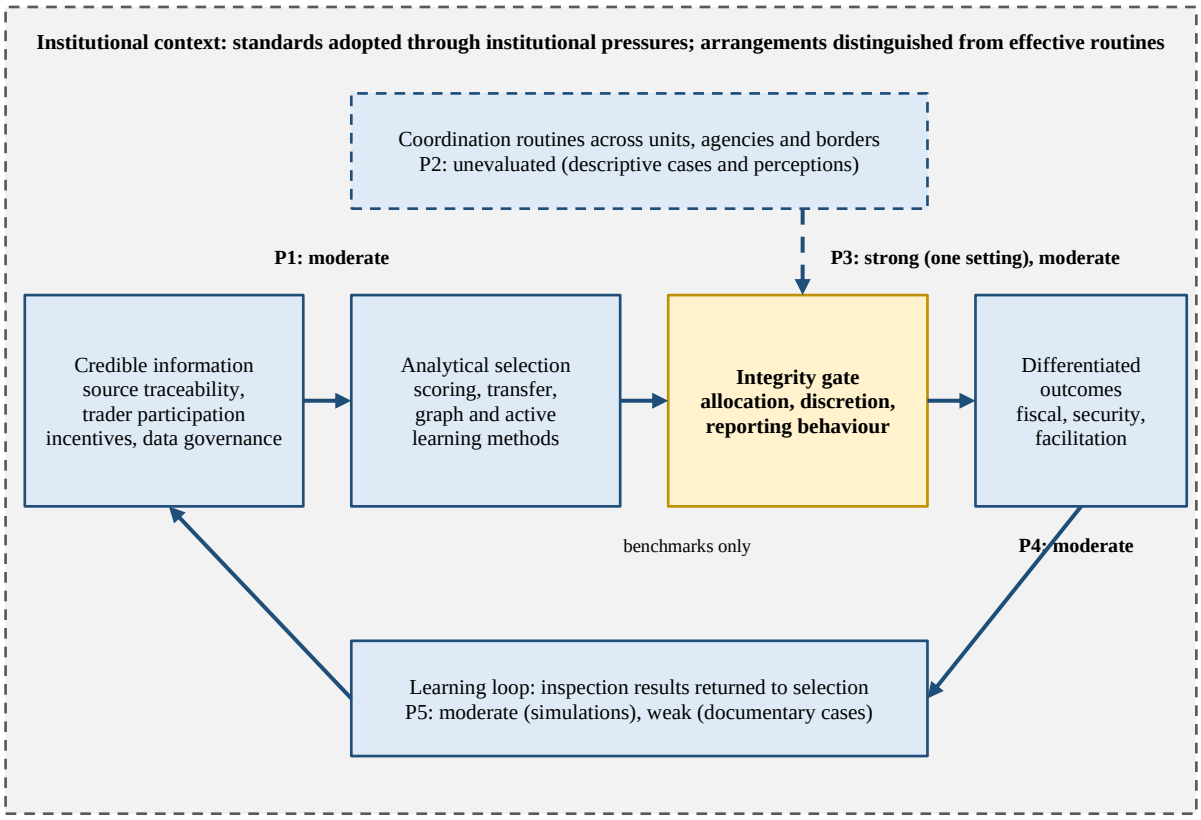
5. Discussion

5.1. A revised explanatory framework

Figure 3 presents the framework revised in the light of the evidence matrix. Four changes distinguish it from the a priori version of Figure 1. Integrity and incentives move from a peripheral condition to a gate located between analytical selection and administrative outcomes, because the only causal evidence in the corpus shows that the manipulation of inspector allocation converts a selection decision into preferential treatment, and because the Argentine and American contributions document the same gate at the selection and misconduct stages (Chalendard et al., 2023; Dominguez Prost & Scattolo, 2024; U.S. Customs and Border

Protection, 2023). Trader participation incentives are added to the information dimension, since the Chinese and Brazilian cases show that the credibility of upstream information depends on the benefits that traders obtain from sharing it (Morini et al., 2024; Zhou et al., 2021). The coordination link is retained but marked as unevaluated, because it rests on descriptive sequences and perceptions. The learning loop from inspection results to selection is retained with a moderate grade, supported by simulations and qualified by documentary evidence of interrupted feedback (Kim et al., 2023; Tan, 2022).

Figure 3: Revised explanatory framework with evidence grade for each link



Source: Author, from the evidence matrix of Table 11.

The revised framework carries a theoretical implication for the concept of organizational capability in customs. The resource based and dynamic capabilities perspectives explain why data, analytics and routines must be combined, but they say little about the agency problem that arises when the officials who operate the routines hold discretion over their outcomes (Barney, 1991; Teece, 2007). The corpus shows that this agency problem is the point at which capability can be captured, so that an administration with advanced analytics and weak allocation integrity can display favourable facilitation indicators while losing revenue (Chalendard et al., 2023; Klitgaard, 1988). Capability in customs is therefore defined here as the joint possession of credible information, authorized routines and accountable discretion, and the absence of any of the three deprives the others of their value. The neo-institutional distinction between adopted arrangements and effective routines applies to every weak cell of the matrix, where the corpus documents what administrations have put in place without evidence of what the arrangement produces (DiMaggio & Powell, 1983).

Revenue, security and commercial predictability represent distinct responsibilities and therefore require differentiated measures (Duhaut, 2023). Enforcement results depend on trade exposure, inspection coverage and recording, while clearance intervals encompass processes distributed across organizations (Duhaut, 2023). Computational benchmarks, administrative associations and institutional explanations consequently occupy distinct evidential roles within

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the synthesis (Gough, 2021). Each finding retains its setting, outcome definition and methodological qualification when informing comparisons across customs systems (Campbell et al., 2020).

5.2. Positioning relative to earlier syntheses

Table 12 positions the review relative to the syntheses and reference works against which its contribution should be judged. The review confirms the three recurrent themes identified by the earlier literature review, namely training, information exchange and the integration of risk management with intelligence, and it adds a grade of evidence to each, which shows that the first two rest on descriptive cases while the third is unevaluated (Karklina-Admine et al., 2024). It qualifies the technology centred synthesis by showing that the implementation examples it reports do not include evaluated effects on security outcomes and that two of the technological proposals in the corpus come from interested parties (Vijayakumar, 2025). It confirms the position of the modernization handbook and of the IMF review that selectivity, post clearance audit and integrity must be reformed together, and it adds the empirical observation that the corpus published since 2020 contains one causal study of this interaction (De Wulf & Sokol, 2005; Pérez Azcárraga et al., 2022). It connects the economic literature on evasion and corruption, which establishes the incentives, to the organizational literature, which describes the arrangements, and it shows that the two have been joined empirically in only three contributions (Chalendard et al., 2023; Fisman & Wei, 2004; Sequeira & Djankov, 2014).

Table 12: Positioning of the review relative to earlier syntheses and reference works

Earlier work	What it establishes	What the present review confirms	What the present review qualifies or adds
Karklina-Admine et al. (2024), literature review	Recurrent themes: training, information exchange, integration with intelligence	The three themes appear in the corpus	Grades the evidence: training and exchange rest on descriptive cases; integration with intelligence is unevaluated
Vijayakumar (2025), technology centred synthesis	Catalogue of technologies for supply chain security with examples	Technologies are widely documented	No evaluated effect on security outcomes; two proposals come from interested parties
De Wulf & Sokol (2005), modernization handbook; Pérez Azcárraga et al. (2022), IMF review	Selectivity, post clearance audit and integrity must be designed together	The interaction is central to the only causal study	Identifies the absence of evaluations of this interaction in research since 2020
WCO (2011, 2021), risk management compendium and SAFE Framework	Standards for selectivity, advance information and partnership	Standards structure the arrangements described	Distinguishes adopted standards from effective routines; shows that adoption is documented and effects are not
Fisman & Wei (2004); Javorcik & Narciso (2008); Sequeira & Djankov (2014), evasion and corruption economics	Evasion and bribery respond to tariffs, product differentiation and discretion	Incentives explain the Madagascar and Argentine findings	Connects incentives to organizational arrangements; three contributions join the two literatures

Source: Author.

5.3. RQ3: Implications for Moroccan customs

The Moroccan administration operates the conditions that the framework identifies as decisive. It processes more than two million declarations through the BADR system, subjects 20.4 percent of import declarations to targeted verification, releases 64 percent of import declarations within four hours and derives 6.24 billion dirhams from control activity (ADII, 2025). These indicators correspond to the facilitation, selection and fiscal domains of Table 1, and they are published as aggregates whose relation to one another is the object of the questions that the corpus leaves open. Local research directs attention to information feedback and to the detail communicated to inspection officers, since declaration level targeting with limited

explanation of suspected risks may constrain focused examination (Boutabratine, 2023). Regional variation in routes and commodity groups justifies decentralized attention and gives frontline knowledge a role in recognizing vulnerabilities, and the institutional comparison shows that international standards enter Moroccan arrangements through choices about authority and cooperation (Dafir & Imarhane, 2024; Sabri & Mouhacine, 2026). The aggregate analysis of clearance and revenue trends documents modernization and managerial perceptions, with attribution constrained by six and ten annual observations (Attaoui, 2026).

Table 13: Prioritized implications for the Moroccan customs administration

Tier and mechanism	Supporting evidence and grade	Transfer condition for Morocco	Responsible actor	Evaluable indicator
1. Integrity of inspector allocation and follow through	Chalendard et al. (2023), strong; Dominguez Prost & Scattolo (2024), moderate	Allocation of declarations to inspectors is automated and auditable; exceptions to automated allocation are logged and reviewed	Direction of the customs administration; internal audit and inspection services	Share of declarations reassigned after automated allocation; dispersion of recorded adjustments across inspectors for comparable declarations
1. Local validation of analytical selection	Jeong et al. (2023), Park et al. (2022), Singh et al. (2023), Kim et al. (2023), moderate	Candidate selection methods are tested on historical Moroccan declarations and inspection results before deployment	Risk management and information systems directorates	Precision and revenue capture of selectivity rules at the current verification share, measured on past inspections
1. Feedback from inspection results to selectivity rules	Kim et al. (2023), moderate; Tan (2022), Boutabratine (2023), weak	Inspection outcomes are recorded in a structured form and returned to the rule management process within a defined delay	Risk management directorate; regional directorates	Share of selectivity rules revised on the basis of inspection results; delay between inspection and rule update
2. Trader participation and advance information	Zhou et al. (2021), Morini et al. (2024), moderate	Authorized operators and logistics platforms obtain measurable benefits from sharing upstream data	Customs administration with the port community system operator	Share of declarations lodged with advance data; release time of participating operators against others
2. Reporting behaviour and protection of staff	Wibiastika & Darma (2024), U.S. Customs and Border Protection (2023), moderate	Formal reporting channels are accompanied by credible protection and by routines that make their use ordinary	Human resources and ethics functions; internal audit	Number and treatment of internal reports; staff survey on perceived protection
2. Differentiated performance measurement	Duhaut (2023), WCO (2024), conceptual; Chalendard et al. (2023), strong for the speed and enforcement relation	Facilitation indicators are published together with the enforcement results of the same declarations	Directorate in charge of performance reporting	Joint distribution of release time and recorded adjustments by channel and office
3. Coordination with partner agencies and regional adaptation	Puno Diokno (2023), Hong (2020), Dafir & Imarhane (2024), weak; Antov et al. (2026), moderate for perceptions	Responsibilities for assessing regional observations, escalating concerns and revising risk treatment are documented	Regional directorates; partner agencies at ports and border crossings	Number of regional risk proposals adopted into national rules; time to decision on interagency referrals
3. Specialist skills and personnel continuity	Tan (2025), Hong (2020), weak	Rotation of specialized staff is accompanied by documented knowledge transfer	Human resources function; training institute	Retention of trained targeting staff; documentation of profiling methods

Source: Author, from Tables 8 and 11 and ADII (2025).

Table 13 translates the graded evidence into implications for the Administration des Douanes et Impôts Indirects. Each implication names the mechanism, the evidence that supports it, the

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condition under which it transfers to Morocco, the responsible actor and an indicator that the administration already publishes or could compute from its clearance system. The implications are ordered in three tiers according to the grade of the supporting evidence, so that the first tier rests on strong or moderate evidence and the third tier identifies arrangements whose effect remains to be evaluated locally.

Three cautions accompany these implications. The strong evidence concerns one port in Madagascar, and its transfer presupposes that the Moroccan allocation procedure presents comparable discretion, which only an internal examination can establish. The moderate computational evidence concerns retrospective benchmarks, and the indicator proposed in Table 13 is precisely the local validation that would convert it into evidence for Morocco. The implications of the third tier describe arrangements that the Moroccan literature already recommends, and the review adds that their effect has been measured nowhere in the corpus, which argues for implementing them with an evaluation design rather than against implementing them.

5.4. Limitations

The limitations of the review concern its nature as much as its execution. Retrieval relied on general web search services with domain qualifiers, which produce finite and changing result sets, exclude Scopus and Web of Science and favour well indexed sources (Gusenbauer & Haddaway, 2020). The World Customs Journal therefore provides more than half of the corpus, and the conclusions describe accessible research rather than the field. Screening and extraction were assisted by a large language model, with verification of every decision by a single author rather than dual independent human screening, so that shared assumptions and undetected errors remain possible (Khraisha et al., 2024). The protocol was written on the day of the search and was not registered in advance, and the deposit of the protocol, the register and the matrices in a public repository compensates this absence only partially. The exclusion of Arabic, of theses and of institutional reports without an investigation reduces coverage of Moroccan work, and the Moroccan evidence in the corpus is limited to four documentary or aggregate contributions, two of them published in the submitting journal. The time window excludes the foundational studies of selectivity and integrity, which enter the theoretical framework but not the corpus. The appraisal was performed by one author with adapted criteria, and the evidence grades express a judgment about design rather than a validated score. These limitations motivated the requalification of the study and of its title, and they imply that the conclusions should be read as a graded map of accessible evidence and as an agenda, rather than as an exhaustive assessment.

5.5. Research agenda for Morocco

Table 14 derives from the empty and weak cells of the evidence matrix a set of research questions for Morocco, each with a feasible design and the data it would require. The agenda gives priority to designs that link selection, action and outcome within defined populations and periods, because the corpus shows that this link is the one most often assumed and least often evaluated. Several of the proposed designs rely on data that the administration already produces, namely declaration level records of the clearance system, inspection results, adjustments and recoveries, and on institutional reports that document reforms and their timing, including the annual reports of the administration and the public reports of the Cour des comptes.

Table 14: Research agenda for Morocco derived from the evidence matrix

Research question	Feasible design	Data to mobilize	Framework link addressed
Does automated allocation of declarations to inspectors change recorded adjustments and release times for comparable declarations?	Quasi-experimental comparison before and after a change in allocation procedure, with declaration level controls and office fixed effects	Declaration level records of the clearance system, inspector identifiers, adjustments, release times	Integrity gate; P3 and P4
How does the predictive performance of selectivity rules on Moroccan declarations compare with published methods?	Retrospective benchmark on historical declarations and inspection results, with precision, recall and revenue capture at the current verification share	Historical declarations, inspection outcomes, duties assessed	Analytical selection; P1
Does structured feedback from inspection results to rule management improve subsequent targeting?	Interrupted time series around the introduction of a feedback procedure, by office and commodity group	Rule revision logs, inspection results, hit rates by rule	Learning loop; P5
Do operators that share advance information obtain faster release without weaker control results?	Matched comparison of authorized and non-authorized operators on release time and adjustments	Operator status, declaration records, adjustments	Information and trader participation; P1 and P4
Which conditions make officers use formal reporting channels?	Survey of officers across regional directorates with scenario questions, combined with interviews	Staff survey, interviews, records of internal reports	Integrity and reporting behaviour; P3
Do regional risk proposals enter national selectivity rules, and with what delay?	Documentary and interview study of the rule management process across regions	Rule proposals, adoption decisions, interviews in regional directorates	Coordination and local adaptation; P2
What is the relation between facilitation indicators and enforcement results across offices?	Panel analysis of offices over several years with office and year effects	Office level release times, adjustments, recoveries, trade composition	Differentiated outcomes; P4

Source : Author.

6. Conclusion

This structured scoping review set out to determine which mechanisms of integrated customs risk management are supported by accessible research, which outcomes have been evaluated and with what strength of evidence, and which conditions govern the transfer of these findings to Morocco. On RQ1, the 32 contributions published since 2020 support five mechanisms at different levels. Information quality and traceability and the feedback from inspection results to selection are supported by moderate evidence from computational benchmarks and interview-based cases. Integrity safeguards in the allocation of declarations are supported by strong evidence in one setting and by moderate evidence in two others. Coordination across units and agencies and the continuity of specialist skills are documented by descriptive cases that establish plausible sequences without measuring effects. On RQ2, fiscal outcomes are the only domain with a causal estimate, security outcomes rest on activity records and facilitation outcomes rest on reported experience, with one evaluated result showing that faster clearance accompanied preferential treatment. On RQ3, the Moroccan literature supplies mechanisms and questions rather than evaluated relationships, and the transfer of the international findings depends on three conditions, namely the auditability of inspector allocation, the local validation of selection methods on Moroccan declarations and the structured return of inspection results to rule management.

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The theoretical contribution is a definition of customs risk management capability as the joint possession of credible information, authorized routines and accountable discretion, in which integrity operates as a gate between analytical selection and administrative outcomes rather than as an external condition. This definition extends the resource based and dynamic capabilities perspectives with the agency problem that the economics of customs corruption has established, and it uses the neo-institutional distinction between adopted arrangements and effective routines to explain why most of the corpus documents arrangements without effects. The methodological contribution is a graded evidence matrix that makes visible the links for which no evaluation exists.

For the Moroccan customs administration, the review recommends, in order of evidential support, the audit of exceptions to automated inspector allocation, the validation of selectivity methods on historical Moroccan declarations before deployment, the structured return of inspection results to rule management within a defined delay, the joint publication of release times and enforcement results for the same declarations and the implementation of regional coordination and knowledge transfer arrangements with an evaluation design. For researchers, the agenda of Table 14 specifies seven questions whose designs rely largely on data that the administration already produces. The conclusions remain bounded by a web-based retrieval, by a corpus concentrated in one journal, by a single author appraisal with artificial intelligence assistance and by the limited Moroccan evidence, which is why the study is presented as a graded map of accessible research and as a basis for the evaluations that the field still lacks.

References

(1). Administration des Douanes et Impôts Indirects. (2025). *Rapport d'activité 2024*. Ministère de l'Économie et des Finances, Royaume du Maroc. Retrieved 18 October 2026, from https://www.douane.gov.ma

(2). Antov, M., Peycheva, B., Kostova, S., & Zhelev, Z. (2026). Digital aspects of customs control in the new European customs reform initiative. *World Customs Journal, 20*(1), 44–66. https://doi.org/10.55596/001c.156039

(3). Arksey, H., & O'Malley, L. (2005). Scoping studies: Towards a methodological framework. *International Journal of Social Research Methodology, 8*(1), 19–32. https://doi.org/10.1080/1364557032000119616

(4). Attaoui, H. (2026). Gestion des risques et performance à l'ère des technologies de rupture : cas de la douane marocaine. *International Journal of Accounting, Finance, Auditing, Management and Economics, 7*(9), 669–688. https://doi.org/10.5281/zenodo.21820053

(5). Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management, 17*(1), 99–120. https://doi.org/10.1177/014920639101700108

(6). Bersin, A., Swartz, P., & Karlsson, L. (2025). Managing supply and value chains in a new era of global trade: The promise of federated learning. *World Customs Journal, 19*(1), 80–91. https://doi.org/10.55596/001c.133998

(7). Boutabratine, O. (2023). L'approche d'analyse des risques en douane. Une approche pour une meilleure facilitation des échanges et réduction des coûts des échanges. Cas de la douane du Maroc. *African Scientific Journal, 3*(16), 740–774. https://doi.org/10.5281/zenodo.7756782

(8). Campbell, M., McKenzie, J. E., Sowden, A., Katikireddi, S. V., Brennan, S. E., Ellis, S., Hartmann-Boyce, J., Ryan, R., Shepperd, S., Thomas, J., Welch, V., & Thomson, H. (2020). Synthesis without meta-analysis (SWiM) in systematic reviews: Reporting guideline. *BMJ, 368*, Article l6890. https://doi.org/10.1136/bmj.l6890

(9). Cantens, T., Jadotte, E., MacWilliam, D. C., & Suarez, J. (2024). *Haiti: Strengthening customs administration in an insecure environment*. World Bank. Retrieved 18 October 2026, from

https://documents1.worldbank.org/curated/en/099051724102532865/pdf/P18025713dadcb0bf1aa581c9ab8215e82b.pdf

(10). Chalendard, C., Fernandes, A. M., Raballand, G., & Rijkers, B. (2023). Corruption in customs. *The Quarterly Journal of Economics, 138*(1), 575–636. https://doi.org/10.1093/qje/qjac032

(11). Dafir, A., & Imarhane, H. (2024). Gestion des risques dans l'administration des douanes marocaine : enjeux et perspectives. *International Journal of Accounting, Finance, Auditing, Management and Economics, 5*(11), 726–734. https://doi.org/10.5281/zenodo.14559947

(12). De Wulf, L., & Sokol, J. B. (Eds.). (2005). *Customs modernization handbook*. World Bank. http://hdl.handle.net/10986/7216

(13). DiMaggio, P. J., & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review, 48*(2), 147–160. https://doi.org/10.2307/2095101

(14). Dominguez Prost, E. R., & Scattolo, G. (2024). Inspections in customs: A case study of the role of tariff dispersion on red lane classification in Argentina. *World Customs Journal, 18*(1), 33–49. https://doi.org/10.55596/001c.116521

(15). Duchek, S. (2020). Organizational resilience: A capability-based conceptualization. *Business Research, 13*(1), 215–246. https://doi.org/10.1007/s40685-019-0085-7

(16). Duhaut, A. (2023). Government analytics using customs data. In D. Rogger & C. Schuster (Eds.), *The government analytics handbook: Leveraging data to strengthen public administration* (pp. 307–325). World Bank. https://doi.org/10.1596/978-1-4648-1957-5

(17). Fisman, R., & Wei, S.-J. (2004). Tax rates and tax evasion: Evidence from "missing imports" in China. *Journal of Political Economy, 112*(2), 471–496. https://doi.org/10.1086/381476

(18). Fjeldstad, O.-H., Checcucci Filho, E., & Raballand, G. (2020). Corruption in customs: How can it be tackled? In R. Bajpai & B. Myers (Eds.), *Enhancing government effectiveness and transparency: The fight against corruption* (pp. 122–134). World Bank. Retrieved 18 October 2026, from https://thedocs.worldbank.org/en/doc/735411611672776353-0090022021/original/CustomsAdministration.pdf

(19). Fukuyama, F. (2013). What is governance? *Governance, 26*(3), 347–368. https://doi.org/10.1111/gove.12035

(20). Garritty, C., Gartlehner, G., Nussbaumer-Streit, B., King, V. J., Hamel, C., Kamel, C., Affengruber, L., & Stevens, A. (2021). Cochrane Rapid Reviews Methods Group offers evidence-informed guidance to conduct rapid reviews. *Journal of Clinical Epidemiology, 130*, 13–22. https://doi.org/10.1016/j.jclinepi.2020.10.007

(21). Gough, D. (2021). Appraising evidence claims. *Review of Research in Education, 45*(1), 1–26. https://doi.org/10.3102/0091732X20985072

(22). Gusenbauer, M., & Haddaway, N. R. (2020). Which academic search systems are suitable for systematic reviews or meta-analyses? Evaluating retrieval qualities of Google Scholar, PubMed, and 26 other resources. *Research Synthesis Methods, 11*(2), 181–217. https://doi.org/10.1002/jrsm.1378

(23). Heijmann, F., Tan, Y.-H., Rukanova, B., & Veenstra, A. (2020). The changing role of Customs: Customs aligning with supply chain and information management. *World Customs Journal, 14*(2), 131–142. https://doi.org/10.55596/001c.116423

(24). Hong, Q. N., Fàbregues, S., Bartlett, G., Boardman, F., Cargo, M., Dagenais, P., Gagnon, M.-P., Griffiths, F., Nicolau, B., O'Cathain, A., Rousseau, M.-C., Vedel, I., & Pluye, P. (2018). The Mixed Methods Appraisal Tool (MMAT) version 2018 for information professionals and researchers. *Education for Information, 34*(4), 285–291. https://doi.org/10.3233/EFI-180221

(25). Hong, S. (2020). Enhancing customs control in Cambodia through risk management policy. *World Customs Journal, 14*(1), 55–70. https://doi.org/10.55596/001c.116309

ISSN: 2658-8455
Volume 7, Issue 14 (2026), pp. 350-382.
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International Journal of Accounting, Finance, Auditing, Management & Economics

(26). Janssen, M., Brous, P., Estevez, E., Barbosa, L. S., & Janowski, T. (2020). Data governance: Organizing data for trustworthy artificial intelligence. *Government Information Quarterly, 37*(3), Article 101493. https://doi.org/10.1016/j.giq.2020.101493

(27). Javorcik, B. S., & Narciso, G. (2008). Differentiated products and evasion of import tariffs. *Journal of International Economics, 76*(2), 208–222. https://doi.org/10.1016/j.jinteco.2008.07.002

(28). Jeong, C., Kim, S., Park, J., & Choi, Y. (2023). *Customs import declaration datasets* (Version 3) [Preprint]. arXiv. https://arxiv.org/abs/2208.02484v3

(29). Karklina-Admine, S., Cevers, A., Kovalenko, A., & Auzins, A. (2024). Challenges for customs risk management today: A literature review. *Journal of Risk and Financial Management, 17*(8), Article 321. https://doi.org/10.3390/jrfm17080321

(30). Khraisha, Q., Put, S., Kappenberg, J., Warraitch, A., & Hadfield, K. (2024). Can large language models replace humans in systematic reviews? Evaluating GPT-4's efficacy in screening and extracting data from peer-reviewed and grey literature in multiple languages. *Research Synthesis Methods, 15*(4), 616–626. https://doi.org/10.1002/jrsm.1715

(31). Kim, S., Mai, T.-D., Han, S., Park, S., Thi Nguyen, D. K., So, J., Singh, K., & Cha, M. (2023). Active learning for human-in-the-loop customs inspection. *IEEE Transactions on Knowledge and Data Engineering, 35*(12), 12039–12052. https://doi.org/10.1109/TKDE.2022.3144299 (Advance online publication 2022)

(32). Klitgaard, R. (1988). *Controlling corruption*. University of California Press.

(33). Kusumawardhani, N. P., & Puno Diokno, J. (2022). Strengthening integrity by building integrated systems: A comparative case study of Indonesia and the Philippines. *World Customs Journal, 16*(1), 135–144. https://doi.org/10.55596/001c.116466

(34). Levac, D., Colquhoun, H., & O'Brien, K. K. (2010). Scoping studies: Advancing the methodology. *Implementation Science, 5*, Article 69. https://doi.org/10.1186/1748-5908-5-69

(35). Mavlonov, A. (2023). The effect on anti-corruption of the customs information systems of the Republic of Uzbekistan. *World Customs Journal, 17*(2), 5–12. https://doi.org/10.55596/001c.88098

(36). Mikalef, P., & Gupta, M. (2021). Artificial intelligence capability: Conceptualization, measurement calibration, and empirical study on its impact on organizational creativity and firm performance. *Information & Management, 58*(3), Article 103434. https://doi.org/10.1016/j.im.2021.103434

(37). Mikalef, P., Krogstie, J., Pappas, I. O., & Pavlou, P. (2020). Exploring the relationship between big data analytics capability and competitive performance: The mediating roles of dynamic and operational capabilities. *Information & Management, 57*(2), Article 103169. https://doi.org/10.1016/j.im.2019.05.004

(38). Morini, C., Pieri Leonardo, F., Chaudhary, V., & Hintsa, J. (2024). A paradigm shift in cross-border e-commerce regulatory compliance: Evidence from Brazil. *World Customs Journal, 18*(2), 3–19. https://doi.org/10.55596/001c.123504

(39). Nelson, C. (2020). Machine learning for detection of trade in strategic goods: An approach to support future customs enforcement and outreach. *World Customs Journal, 14*(2), 119–130. https://doi.org/10.55596/001c.116422

(40). Outram, M., & Swartz, P. (2026). Modern border management: Leveraging AI systems for strategic advantage. *World Customs Journal, 20*(1), 167–189. https://doi.org/10.55596/001c.159458

(41). Pablo, A. L., Reay, T., Dewald, J. R., & Casebeer, A. L. (2007). Identifying, enabling and managing dynamic capabilities in the public sector. *Journal of Management Studies, 44*(5), 687–708. https://doi.org/10.1111/j.1467-6486.2006.00675.x

(42). Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S.,

. . . Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *BMJ, 372*, Article n71. https://doi.org/10.1136/bmj.n71

(43). Park, S., Kim, S., & Cha, M. (2022). Knowledge sharing via domain adaptation in customs fraud detection. *Proceedings of the AAAI Conference on Artificial Intelligence, 36*(11), 12062–12070. https://doi.org/10.1609/aaai.v36i11.21465

(44). Pérez Azcárraga, A. A., Matsudaira, T., Montagnat-Rentier, G., Nagy, J., & Clark, R. J. (2022). *Customs matters: Strengthening customs administration in a changing world*. International Monetary Fund. https://doi.org/10.5089/9798400200120.071

(45). Piening, E. P. (2013). Dynamic capabilities in public organizations: A literature review and research agenda. *Public Management Review, 15*(2), 209–245. https://doi.org/10.1080/14719037.2012.708358

(46). Popay, J., Roberts, H., Sowden, A., Petticrew, M., Arai, L., Rodgers, M., Britten, N., Roen, K., & Duffy, S. (2006). *Guidance on the conduct of narrative synthesis in systematic reviews: A product from the ESRC Methods Programme*. Lancaster University. https://doi.org/10.13140/2.1.1018.4643

(47). Puno Diokno, J. (2023). Strengthening inter-agency cooperation and coordination in the implementation of the Strategic Trade Management Act with a view to enhancing trade facilitation: A Philippine customs perspective. *World Customs Journal, 17*(1), 99–110. https://doi.org/10.55596/001c.73210

(48). Ramli, M. S. B. (2025). *Pattern recognition of aluminium arbitrage in global trade data* (Version 1) [Preprint]. arXiv. https://arxiv.org/abs/2512.14410v1

(49). Rethlefsen, M. L., Kirtley, S., Waffenschmidt, S., Ayala, A. P., Moher, D., Page, M. J., Koffel, J. B., & PRISMA-S Group. (2021). PRISMA-S: An extension to the PRISMA statement for reporting literature searches in systematic reviews. *Systematic Reviews, 10*(1), Article 39. https://doi.org/10.1186/s13643-020-01542-z

(50). Rethlefsen, M. L., & Page, M. J. (2022). PRISMA 2020 and PRISMA-S: Common questions on tracking records and the flow diagram. *Journal of the Medical Library Association, 110*(2), 253–257. https://doi.org/10.5195/jmla.2022.1449

(51). Sabri, B., & Mouhacine, H. (2026). La gouvernance douanière à l'ère de l'interdépendance : régulation, adaptation et souveraineté. *Revue Internationale du Chercheur, 7*(1), 576–598. Retrieved 18 October 2026, from https://www.revuechercheur.com/index.php/home/article/view/1663

(52). Sequeira, S., & Djankov, S. (2014). Corruption and firm behavior: Evidence from African ports. *Journal of International Economics, 94*(2), 277–294. https://doi.org/10.1016/j.jinteco.2014.08.010

(53). Singh, K., Tsai, Y.-C., Li, C.-T., Cha, M., & Lin, S.-D. (2023). GraphFC: Customs fraud detection with label scarcity. In *Proceedings of the 32nd ACM International Conference on Information and Knowledge Management (CIKM '23)*. Association for Computing Machinery. https://doi.org/10.1145/3583780.3614690

(54). Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research, 104*, 333–339. https://doi.org/10.1016/j.jbusres.2019.07.039

(55). Tan, A. (2022). Strengthening customs control and trade facilitation: A case study of Sihanoukville International Port, Cambodia. *World Customs Journal, 16*(2), 99–114. https://doi.org/10.55596/001c.116323

(56). Tan, A. (2025). A critical case study on the implementation of the United Nations Office on Drugs and Crime and World Customs Organization Passenger and Cargo Control Programme and its role in enhancing customs risk management. *World Customs Journal, 19*(2), 101–111. https://doi.org/10.55596/001c.144229

(57). Teece, D. J. (2007). Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal, 28*(13), 1319–1350. https://doi.org/10.1002/smj.640

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© Authors: CC BY-NC-ND

(58). Thomas, J., & Harden, A. (2008). Methods for the thematic synthesis of qualitative research in systematic reviews. *BMC Medical Research Methodology, 8*, Article 45. https://doi.org/10.1186/1471-2288-8-45

(59). Tranfield, D., Denyer, D., & Smart, P. (2003). Towards a methodology for developing evidence-informed management knowledge by means of systematic review. *British Journal of Management, 14*(3), 207–222. https://doi.org/10.1111/1467-8551.00375

(60). Tricco, A. C., Lillie, E., Zarin, W., O'Brien, K. K., Colquhoun, H., Levac, D., Moher, D., Peters, M. D. J., Horsley, T., Weeks, L., Hempel, S., Akl, E. A., Chang, C., McGowan, J., Stewart, L., Hartling, L., Aldcroft, A., Wilson, M. G., Garritty, C., . . . Straus, S. E. (2018). PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and explanation. *Annals of Internal Medicine, 169*(7), 467–473. https://doi.org/10.7326/M18-0850

(61). Tyndall, J. (2010). *AACODS checklist*. Flinders University. Retrieved 18 October 2026, from https://dspace.flinders.edu.au/xmlui/handle/2328/3326

(62). U.S. Customs and Border Protection. (2023). *Corruption in CBP: A retrospective study of cases* (Publication No. 3285-0723). Office of Professional Responsibility, Integrity Assurance Program. Retrieved 18 October 2026, from https://www.cbp.gov/document/report/corruption-cbp-retrospective-study-cases

(63). Vijayakumar, S. (2025). Technology-centric and data-driven customs risk management for supply chain security. *World Customs Journal, 19*(1), 38–63. https://doi.org/10.55596/001c.131745

(64). Wibiastika, I. B. K., & Darma, G. S. (2024). Implementation of the Integrity Zone program to improve Indonesian Customs' anti-corruption culture: A case study of Denpasar Customs. *World Customs Journal, 18*(2), 77–95. https://doi.org/10.55596/001c.123944

(65). Widdowson, D. (2020). Managing customs risk and compliance: An integrated approach. *World Customs Journal, 14*(2), 63–80. https://doi.org/10.55596/001c.116418

(66). World Customs Organization. (2011). *Customs risk management compendium* (Vol. 1). World Customs Organization.

(67). World Customs Organization. (2021). *SAFE Framework of Standards to secure and facilitate global trade* (2021 ed.). World Customs Organization.

(68). World Customs Organization. (2024). *WCO handbook on performance measurement* (Public version). Retrieved 18 October 2026, from https://www.wcoomd.org/-/media/wco/public/global/pdf/topics/capacity-building/instruments-and-tools/pmm/hpm-en_public-version.pdf?db=web

(69). World Trade Organization. (2014). *Agreement on Trade Facilitation* (WT/L/931). World Trade Organization.

(70). Zhou, X., Tan, Y.-H., & Rukanova, B. (2021). Enabling supply chain visibility and compliance through voluntary information sharing with customs: A case study of the Global Quality Traceability System in China Customs. *World Customs Journal, 15*(2), 129–150. https://doi.org/10.55596/001c.116453