Platform Return Policy Regimes in China, Japan, and Korea and AI-Based Solution Proposals

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Abstract

This paper examines e-commerce return and refund regimes in China, Japan, and Korea from a governance perspective. Rather than comparing statutory provisions in isolation, it focuses on how legal status allocation—obligations, powers, and exemptions among consumers, sellers, and platforms—together with remedy-pathway design, shapes operational outcomes. Mapping institutional differences to platform operations, the paper identifies three recurring "operational frictions": (1) case-review frictions caused by misrecognition under incomplete, inconsistent, or manipulated evidence; (2) actor-management frictions driven by repeated abuse and the need for justified, proportionate interventions; and (3) rule-updating frictions where standards lag behind evolving behaviors and dispute resolutions. Building on this framework, the paper proposes a closed-loop AI governance design that links ex-ante prevention, in-process review, and ex-post improvement through shared operational data. Importantly, AI is positioned not as a decision substitute but as a governance instrument to enhance consistency, transparency, and auditability, under explicit conditions including human-in-the-loop control, audit-log design, remedy linkage (appeals/ADR), and data-protection constraints calibrated to each liability type

Keywords: E-commerce, Return Policy, AI Governance, China-Japan-Korea, Dispute Resolution

1. Introduction

With the development of internet technologies, e-commerce (EC) has expanded rapidly, especially in the United States and East Asia, and has become a major transaction form.

Because EC is fundamentally non-face-to-face, it inherently involves information asymmetry and high dependence on logistics. Therefore, return and refund arrangements are not only a consumer-protection mechanism but also an institutional foundation that affects platform operations, sellers' cost structures, and ultimately market trust. At the same time, a structural tension exists between consumers' demand for "fast and convenient returns" and the challenges faced by sellers and platforms, such as "increasing abusive returns," "growing review burdens," and "rising operational costs." In practice, higher return rates, rule exploitation, forged evidence (e.g., images and descriptions), and inconsistencies in cross-border transactions have become more visible. As a result, relying solely on human review and static rules is increasingly insufficient to achieve both fairness and efficiency.

China, Japan, and Korea are geographically close and form an East Asian market sphere in which cross-border transactions have become routine. However, there are substantial differences in consumer protection and platform liability design, making return disputes more likely to surface as operational frictions.

This paper adopts China, Japan, and Korea as comparative cases in East Asia. In China, the amended Law of the People's Republic of China on Protecting Consumers' Rights and Interests legally establishes a "seven-day no-reason return"

system. [1]

Korea also clearly codifies consumers' cooling-off (withdrawal) rights for online transactions. [4] In contrast, Japan does not have a unified statutory withdrawal right that covers EC transactions in general, and return conditions are largely left to sellers' special terms and platform rules. A core determinant of return operations is the platform's legal status and liability type. China's E-commerce Law positions platforms, in certain cases, as key actors responsible for maintaining transaction order and allows for joint liability. In Japan, platforms are more often treated as intermediaries, and their external liability is relatively limited in many situations.

In Korea, certain intermediary responsibilities are stipulated for mail-order brokerage, and liability is constructed primarily around the fulfillment of duties of care. These differences in liability structure shape the required level of governance functions—such as merchant onboarding review, dispute intervention, advance compensation, and information disclosure—and directly influence the design of return/refund operations. [4] To provide an overview, Table 1 summarizes major institutional elements across the three countries.

In addition, the volume of return requests and transaction data generated on EC platforms continues to grow, while abusive return patterns are becoming increasingly sophisticated. In particular, identifying high-risk actors and dynamically balancing review-resource allocation, cost burdens, and consumer protection requires a framework of prediction, classification, and optimization grounded in operational data. The key point is to position AI not as "mere labor substitution," but as a governance instrument that reinforces consistency, transparency, and auditability of decision-making, while enabling both effective remedies and deterrence.

The purpose of this paper is to comparatively organize institutional differences in return regimes across China, Japan, and Korea, and to clarify where and how these differences become problematic in real-world operations.

Furthermore, as a shared analytical language that can connect institutional differences to operational improvement, this paper reformulates recurring bottlenecks as three layers of "operational frictions": case review, actor management, and rule updating. Based on this formulation, it proposes design principles for a closed-loop AI governance framework that mitigates these frictions. Here, AI is not treated as a substitute for human judgment; rather, under operational conditions that include explanation, auditability, remedy linkage, and data protection, it is positioned as a governance tool that supports final human decision-making.

The theoretical and practical contributions of this paper can be summarized in three points. First, instead of listing statutory differences as isolated provisions, the paper organizes China–Japan–Korea differences as variations in platforms' legal status and remedy allocation, thereby clarifying the governance-function prerequisites required in operations.

Table 1. Comparison of return-policy regimes and related legal frameworks

Item	China	Japan	Korea
Return System	"Seven-day no-reason return" is legally mandated	No unified statutory return system; governed mainly by sellers' terms	Statutory cooling-off (withdrawal) right
Main Relevant Laws	Law of the People's Republic of China on Protecting Consumers' Rights and Interests, E-commerce Law of the People's Republic of China	Act on Specified Commercial Transactions; Consumer Contract Act	Act on Consumer Protection in Electronic Commerce, etc.
Legal Status of Platforms	Joint liability may apply	Limited liability as an intermediary	Partial joint liability (Mail-order brokerage)
Shipping Cost Allocation	In principle borne by sellers (with exceptions)	Determined by agreement between consumers and sellers	In principle borne by sellers (with exceptions)
Key Characteristics	Strong consumer protection; active platform intervention	Emphasis on market self-regulation and seller autonomy	Balance between consumer protection and seller burden

Second, it operationalizes where institutional differences become problematic by defining "operational frictions" (case review, actor management, and rule updating) and provides a shared axis that links institutional comparison to operational processes. This reframes institutional comparison from a static to a dynamic analytical framework. Third, it positions AI as a governance instrument that ensures explanation, auditing, and remedy linkage, and proposes a closed-loop AI governance design (ex-ante prevention, in-process review, and ex-post improvement) along with the conditions for its application.

The research questions (RQs) of this paper are as follows.

RQ1: How do return regimes differ across China, Japan, and Korea, and what do these differences produce?

RQ2: In which layers of operations (case review, actor management, rule updating) do institutional differences generate frictions such as misrecognition, abuse, and delay, and how?

RQ3: Where and how can AI complement return operations? And how should a closed-loop return governance design (ex-ante prevention, in-process review, ex-post improvement) be structured so that it remains applicable across different institutional types?

2. Related Work

Return governance in e-commerce is inseparable from the design of return rights, the allocation of platform responsibility, remedy procedures, and operational standards such as evidentiary requirements and review criteria. With the expansion of Electronic Commerce (EC), rising return rates, and the increasing falsification of evidentiary information, it has become difficult for human review and static rules alone to satisfy fairness and efficiency simultaneously.

Consequently, operational governance—including the use of AI—has emerged as a practical research focus.

This chapter reviews prior studies from three perspectives: (1) consumer protection and return (withdrawal rights), (2) platform responsibility, and (3) AI governance. It then reorganizes unresolved issues from the viewpoint of "in which operational layers institutional differences surface as frictions." In particular, this study does not treat institutional differences as a mere list of statutory divergences; instead, it interprets them as differences in the allocation of legal status between consumers and platforms. Such differences determine the evidence and standards required for review, the feasibility and justification conditions for intervention against abusive actors, and the design conditions for remedy linkage and rule updating, thereby shaping where operational bottlenecks emerge. [49]

Based on the above, this study conceptualizes how institutional differences appear in practice as "operational frictions," namely: (1) case review (misrecognition), (2) actor management (abuse), and (3) rule updating (delay). AI is positioned as an instrument that makes judgment "governable," and is treated as a governance design that includes explainability, auditability, and remedy linkage.

2.1 Studies on Consumer Protection and Return

Research on withdrawal (cooling-off) rights has theoretically demonstrated that, in the context of information asymmetry and quality uncertainty inherent in distance transactions, withdrawal rights can serve as a risk-correction mechanism. [35] From a comparative-law perspective, China is commonly described as having legally mandated a "seven-day no-reason return," and ensuring effectiveness by specifying scope, exceptions, and return-shipping conditions through supplementary norms. [36] Korea is also discussed as a design that institutionally supports trust formation in electronic transactions by combining withdrawal rights with ex-ante information disclosure. [4,42] In contrast, Japan is often characterized as not

generalizing a unified withdrawal-right regime for EC, placing greater emphasis on transparency through special terms, and leaving return conditions largely to sellers' self-regulation. [5,37]

Empirical studies point out a trade-off: while introducing or expanding return rights can promote purchasing and trust formation, it may also increase costs related to logistics, inspection, and resale, and can induce institutional abuse (fraudulent returns and habitual returning). [39,40] Analyses based on public materials likewise suggest that malicious returns and differences in operational standards have become visible challenges. [18,25] However, prior studies tend to emphasize normative rationales and side effects, while insufficiently connecting institutional differences to where, in the operational process, they materialize as misrecognition, abuse, and updating delay under a shared analytical axis.

2.2 Studies on EC Platform Responsibility

Platform-responsibility research increasingly views responsibility not merely as attribution in damages, but as a "governance function" that encompasses information disclosure, prevention of risky transactions, complaint handling, and dispute-resolution procedures, supervisory, and exemption requirements—reflecting that transactions are mediated by information infrastructures such as terms, displays, logs, and rating systems. [49] From a comparative-law perspective, the platform's legal status determines "to what extent it is required to intervene as an actor," thereby shaping the design conditions of review, record-keeping, and remedy linkage. This linkage is increasingly treated as a governance design that includes explainability and auditability. In China, statutory law clarifies joint liability and requires platforms to intervene as gatekeepers of transaction order rather than remain neutral intermediaries. [41] At the same time, prior work also notes potential side effects: increased liability risk may raise compliance costs and induce excessive intervention, making the balance between responsibility allocation and market vitality a core issue. [28] In Korea, responsibilities for mail-order brokerage are often organized as conditional liability triggered by certain breaches of duty, with an exemption space based on due care. [16,20] Japan lacks a clearly defined, comprehensive special-law regime of platform liability. Instead, it is argued that transaction appropriateness is pursued relatively more through co-regulation and procedural design centered on transparency and fairness. [44,45]

Figure 1 schematizes how consumer disputes are generated and amplified through actions and feedback among consumers, sellers, and platforms. In this study, the triadic interaction is mapped onto comparative axes—granting of return rights, allocation of responsibility, and remedy pathways (where disputes are absorbed or dispersed)—to examine how institutional differences influence the distribution of operational burdens through operational design. In particular, the strength of the platform's legal status (gatekeeper-ness) affects the extent to which review, record-keeping, and remedy linkage are internalized, and determines the emergence points of the three-layer operational frictions introduced later.

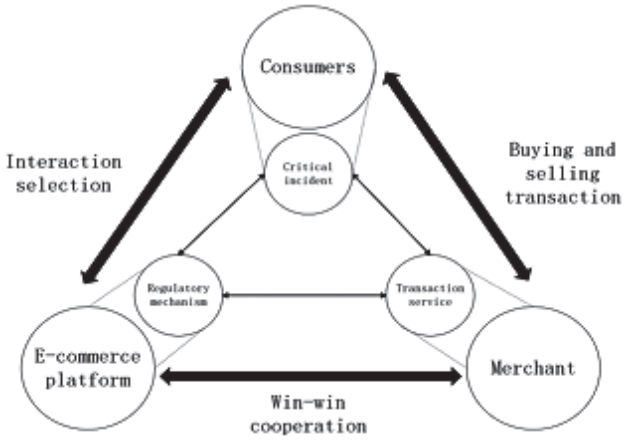

Figure 1. Triadic interaction model of consumer disputes (Source: Chen & Ling (2024), Figure [32]).

Accordingly, by referring to the platform intervention points in Figure 1 (review, compensation, remedy linkage), this study organizes how each country's liability type is

transformed into operational requirements in terms of "intervention intensity" (how far, what, and under which conditions). It then positions AI not as mere automation, but as a governance instrument that ensures judgment consistency, explainability, auditability, and remedy linkage.

Differences in liability types also define governance-design parameters regarding "how far AI should intervene." Under joint-liability-oriented settings, to maintain rapid remedies while reducing misrecognition costs, AI is more likely to be embedded as high-frequency decision support under the prerequisites of audit logs and re-review/remedy linkage. Under duty-of-care settings, recordability that evidences due care becomes central, and AI's emphasis shifts from the conclusion itself to the structuring of "grounds and procedures" (log design and explanation). Under self-regulatory settings, intervention may be weaker as a statutory obligation, yet AI can be positioned as a supporting line for dispute coordination to maintain trust. Nevertheless, prior work remains limited in deriving intervention intensity and requirements from liability types and formalizing them as AI operational conditions.

2.3 Studies on AI Governance and AI Applications in Return/Claim Handling

AI governance research has argued that AI should not be treated merely as an accuracy-improvement technology; rather, it must be organized as a risk-management framework that operationally ensures explainability and controllability. [51,52] Return (claim) handling consists of repetitive process stages such as intake, evidence checking, determination, refunding, and re-review. Under increasing case volumes and more sophisticated tactics, it becomes difficult to ensure consistency, speed, and fairness simultaneously through human labor and static rules alone. Therefore, AI should be positioned not as labor reduction, but as an efficient risk-management system that makes operations "governable" through early risk detection, standardization of review, and structuring of decision grounds.

Prior studies have discussed fraud detection, review support, and customer-service automation, and have highlighted the importance of designs that assume misclassification costs and distribution shift. [33,46,52] However, existing research tends to treat AI adoption as optimization of individual functions, and has not sufficiently organized authority design ("who uses AI, at which stage, and on what grounds"), remedy linkage in cases of erroneous decisions, and audit-log design in correspondence with institutional types (responsibility allocation, remedy pathways, and terms-based governance). In particular, because platform legal status and responsibility structures differ across China, Japan, and Korea, intervention intensity and requirements (log granularity, explanation level, re-review/appeal procedures, and data-use constraints) cannot be uniform; yet integrated frameworks that translate these differences into operational designs remain limited.

Against this background, while maintaining the premise that institutional types and platform legal status differ across China, Japan, and Korea, this study proposes a closed-loop AI governance design that standardizes operational problems as three-layer frictions (misrecognition, abuse, and delay) and presents a "generally applicable design principle" for reducing these frictions.

3. Research Design

Based on the prior studies reviewed above, this chapter presents the research design and methods. The paper first organizes the return-policy regimes of China, Japan, and Korea through a comparative-law approach, and then captures how institutional differences manifest in practice as operational frictions. On this basis, the paper proposes design principles for a closed-loop AI governance framework that can contribute to reducing these frictions.

3.1 Research Scope and Materials

E-commerce markets in East Asia have expanded substantially, and the underlying digital infrastructures (payments, logistics, and platforms) are highly developed. However, each country differs in the institutional design of return rights, platform responsibility, and remedy pathways, which makes it suitable for examining how institutional differences affect operations through comparative analysis. The comparison focuses primarily on China and Japan, while Korea is positioned as a third-country reference frame. The materials analyzed include each country's relevant laws, supervisory policies and guidelines, major platforms' terms and rules, and publicly available dispute cases, statistics, and survey reports.

3.2 Analytical Framework

This paper compares cross-country differences as differences in the allocation of rights, duties, and remedies along three axes: (1) return rights, (2) the platform's legal status, and (3) remedy pathways.

In addition, it re-describes the points where institutional differences appear in practice as a three-layer structure of operational frictions: misrecognition in case review, repetitive abuse in actor management, and delay in rule updating.

To reduce these three layers of friction, the paper assumes the use of operational data (e.g., logs) as inputs and proposes a closed-loop AI governance design (ex-ante prevention, in-process review, and ex-post improvement). AI is positioned not as a substitute for human judgment, but as a governance instrument that improves the structuring of decision grounds and auditability. The paper explicitly specifies human-in-the-loop control, audit logs, explainability, remedy linkage, and data protection as application conditions. Since the analysis relies on public materials, empirical validation using internal logs remains a future task.

4. Institutional Comparison and the Derivation of Operational Frictions

This chapter compares the e-commerce return regimes of China, Japan, and Korea along three institutional axes: return rights, responsibility allocation, and remedy pathways. Differences along these axes do not remain at the level of statutory text; rather, they are translated into concrete operational requirements, such as evidentiary standards for review, the scope of platform intervention, and the design of rule updates.

By reorganizing these practical differences as "operational frictions," this chapter derives a three-layer structure—case review (misrecognition), actor management (abuse), and rule updating (delay)—which provides the analytical foundation for the closed-loop AI governance design proposed in the next chapter.

4.1 Return Rights and Case-Review Frictions

The strength and structure of return rights are reflected in practice through the conditions required for approval and the complexity of exception handling, which directly shape misrecognition in case review. Here, "misrecognition" includes both false negatives (failing to detect abuse) and false positives (improperly restricting legitimate returns).

In China, Article 25 of the amended Law of the People's Republic of China on Protecting Consumers' Rights and Interests legally mandates a "seven-day no-reason return" regime. [1] This design institutionally corrects uncertainty in remote transactions. However, because the regime includes statutory exclusions and return-condition requirements, operational review increasingly focuses on verifying the authenticity and consistency of evidence such as images and descriptions. Typical issues include image substitution, mismatches between shipping labels and product condition, and internal inconsistencies in explanations. While platforms generally adopt "seven-day return" as a default

policy, rising application volumes and increasingly sophisticated evidence manipulation have made it difficult to maintain consistent judgments through human review alone. [18]

In Korea, withdrawal rights are similarly codified under the Act on Consumer Protection in Electronic Commerce, etc., allowing consumers to rescind contracts within a fixed period, subject to statutory exceptions.[4] Operationally, the legality of withdrawal decisions is closely tied to procedural records, including information disclosure, notice timing, and refund processing logs. Screen displays, notification timestamps, and handling records thus become critical evidence supporting lawful review outcomes.

By contrast, Japan does not generalize a unified cooling-off right to EC transactions. [14,17] Return eligibility is largely determined by contractual terms and seller-specific rules. As a result, review criteria tend to be fragmented across categories and sellers, even within the same platform. This fragmentation increases implementation costs and leads to inconsistent outcomes in similar cases. Consequently, misrecognition in Japan often appears not as evidentiary falsification but as variance in standards, which can trigger disputes.

In sum, institutional differences in return-right design determine what evidence is required, how exceptions are handled, and how much discretion exists in review, thereby shaping the conditions under which case-review misrecognition emerges. Strongly codified return rights (China and Korea) tend to increase evidentiary and record-keeping demands, while contract-based regimes (Japan) tend to amplify variance in standards.

4.2 Responsibility Allocation and Actor-Management Frictions

Differences in responsibility allocation determine whether and to what extent platforms are required to intervene in transaction disputes, thereby shaping actor-management frictions related to repetitive abuse. Abuse here includes habitual fraudulent returns, multi-account usage by the same actor, and repeated submission of inconsistent evidence.

In China, Article 38 of the E-commerce Law explicitly provides for joint liability where platforms "knew or should have known" of rights infringements and failed to take necessary measures. [41] Moreover, mechanisms for advanced compensation and recourse are institutionally embedded. Under this model, insufficient intervention itself can generate liability risk, making abuse detection and recurrence prevention core operational functions.

In Korea, responsibilities for mail-order brokerage are typically organized as duty-of-care-based liability, in which responsibility is triggered by specific breaches, while exemptions remain available where due care is demonstrated. [16,20] As a result, actor management emphasizes not only intervention strength but also the documentation of due care, including identity verification, disclosure records, and response logs.

In Japan, platform responsibility is not comprehensively defined in a single special statute. [14] Responsibility is constructed through general law, contracts, and industry practice, leaving intervention strength largely discretionary. While this allows flexible coordination between internal handling and external remedies, it can also lead to limited visibility of abusive patterns and accumulation of unmanaged risks.

Accordingly, responsibility allocation differentiates intervention intensity, justification requirements (notice, records, explanations), and the design responsibility for remedy linkage in cases of misjudgment. Joint-liability-oriented systems emphasize proactive abuse management; duty-of-care systems prioritize evidentiary justification; and discretionary systems risk delayed detection of recurring abuse.

4.3 Remedy Pathways and Rule-Updating Frictions

In all three countries, return disputes are initially handled within platforms. Differences

arise in who bears responsibility when internal handling fails, how strictly refund timelines are regulated, and how disputes connect to external remedies such as administrative bodies or ADR. These factors shape rule-updating frictions, characterized by delayed or reactive revisions of operational standards.

In China, strong consumer-protection norms and potential joint liability incentivize platforms to internalize dispute resolution and prioritize rapid settlement, even at short-term cost. While this facilitates speed, high application volumes and abuse pressures often lead to frequent ad hoc tightening of review requirements, creating lag in consistency and explainability.

In Korea, statutory refund timelines and procedural requirements are relatively clear, making delays immediately visible as compliance issues. [4] Although platforms still handle disputes internally, increasing exception cases can strain operational standards and slow rule updates.

In Japan, reliance on contractual governance and external remedies such as consumer centers means that unresolved disputes are more likely to exit the platform. [13,14] While this provides external relief channels, outcome data may not sufficiently feed back into internal rule revision, increasing the risk of delayed updates.

Across the three cases, institutional differences shape operational design through three requirements:

- Decision requirements (evidence, timing, exceptions);
- Intervention requirements (scope of review, compensation, record-keeping);
- Feedback requirements (whether resolution outcomes are reintegrated into rule updates).

These requirements correspond respectively to ex-ante prevention, in-process review, and ex-post improvement, forming the basis for a closed-loop governance structure.

Table 2. Mapping Institutional Differences to Operational Frictions

Institutional Dimension	Operational Requirement	Resulting Friction	Typical Examples
Return rights	Evidence standards. deadlines. exception handling	Case review (misrecognition)	Inconsistent evidence. deadline disputes
Responsibility allocation	Intervention intensity. log design. justification	Actor management (abuse)	Repetitive abuse. linked accounts
Remedy pathways	Accountability. procedural clarity. external linkage	Rule updating (delay)	Reactive rule changes. standard variance

5. Closed-loop AI Governance Design Based on Operational Frictions

In the previous chapter, the return regimes of the three countries were organized along the axes of return rights, responsibility allocation, and remedy pathways, showing that institutional differences determine the distribution of operational burdens through operational design. Although institutional designs differ, the operational focus consistently converges on balancing "fast and convenient returns" and the operational burdens of review, logistics, and compensation. In China, high convenience can, on the other hand, intensify incentives for abuse and increase compensation costs. In Japan, returns tend to rely on platform terms and ADR-like arrangements, so the certainty and transparency of remedies are more easily left to operational design choices. [13] In Korea, while the withdrawal right is legally provided, the burdens arising from return operations continue to be discussed as policy and operational issues. [20] These observations are consistent with the argument that generous return policies can support trust formation but may also induce abuse incentives and cost increases. [12]

In practice, the issue is not a simple binary choice of "weaken vs. strengthen protection." What is required is to identify bottlenecks in the operational process and design intervention intensity and procedural requirements

accordingly. This study does not stop at enumerating differences in statutory provisions; it reinterprets them as differences in the allocation of legal status and responsibility between consumers and platforms, showing that such allocation differences specify required evidence, the feasibility of intervention against abusive actors, and the demands for remedy/ auditability, thereby determining where bottlenecks arise.

Based on this, this chapter re-formalizes operational frictions into three layers: (1) case review (misrecognition), (2) actor management (abuse), and (3) rule updating (delay), and presents AI utilization pathways corresponding to each layer as a closed loop. AI is positioned not as a labor-saving tool, but as a governance instrument that strengthens consistency and auditability of judgment and makes the coexistence of remedy and deterrence governable.

5.1 Intelligent Review Infrastructure for Case-Review Frictions

Operational friction (1) arises when evidence attached to return requests—such as reason statements and images—is incomplete, leading to misrecognition due to inconsistent standards or information conflicts. In light of the responsibility types organized in the previous chapter, the stronger the intervention duty and accountability imposed on EC platforms, the heavier the practical requirement becomes to ground review outcomes with reasons and connect them to re-review and remedies. Even in regimes where external responsibility is relatively limited, standardization and recordability to avoid arbitrary decisions remain unavoidable for dispute prevention and trust maintenance.

What is required is not for AI to "replace the conclusion." The core is to make contradictions visible, provide checkpoints, and leave the grounds as auditable logs. Typical inconsistencies include: (a) contradiction between the reason statement and attached images; (b) mismatch with order attributes (model, color, accessories); (c) contradiction between logistics claims (e.g., non-delivery) and objective data; and (d) reuse or manipulation of images. Therefore, the design should not rely on a single piece of evidence; instead, it should cross-reference reason text, images, order data, logistics data, and histories to structure decision grounds.

Specifically, the review infrastructure integrates: (1) typology of reason text and contradiction extraction;(2) detection of image matching/ abnormality; and (3) checks against institutional requirements (deadlines, exclusions, procedural requirements), and estimates the "suspiciousness" of each case probabilistically. However, the estimate itself is not the basis of an adverse disposition; it is used as a signal to route cases to human re-review, request additional evidence, or conduct ex-post audits. Operationally, cases can be classified into three tiers (low/medium/high). High-risk cases should not be fixed to automatic rejection; in principle, they should be connected to re-review and appeal procedures (human-in-the-loop). At this time, contradiction types, check results, applicable statutes/terms, and contributing factors should be logged so that explanation and remedy (re-review) entrances are secured simultaneously.

5.2 Risk Estimation and Tiered Intervention for Actor-Management (Abuse) Frictions

Operational friction (2) arises from the tendency for abusive behavior to concentrate on a limited number of actors. While case review focuses on the question of whether an individual request is reasonable, actor-level management addresses the question of to whom intervention should be applied and at what intensity. Although institutional designs differ, the structural consequence of accumulated abuse is common: it increases seller losses, compensation costs, and review burdens, thereby undermining market trust. Accordingly, preventive management that concentrates on a small group of high-risk actors, without impairing the legitimate exercise of rights, becomes necessary.

Table 3. Review and Remedy Design by Risk Level

Risk	Grounds (Examples)	Review	Remedy (Re-review / Objection)
Low	Identity verified; return rate below category average; high consistency among evidence (photos, reason, logistics info)	Recommend instant approval / fast processing	Accept supplementation of reasons/evidence via a self-claim form and re-decide quickly (within 24 hours)
Medium	Return rate above average; concentrated high-value and high-frequency returns; minor inconsistencies between reason codes and evidence; mild duplication of delivery address/device, etc.	Recommend secondary confirmation by customer support to minimize misjudgment risk	Clearly present the procedure for submitting additional evidence and the decision criteria; maintain a standing re-review window (initial response within 48 hours). If behavior normalizes over a period (lower return rate, improved consistency), automatically revert to low risk
High	Large-volume returns in a short period; strong linkage such as multiple accounts / same device / same address; repeated contradictions in evidence; past fraud and frequent disputes	The system recommends refund refusal or human re-review	For adverse outcomes, present reason codes and evidence-category grounds, and separate the procedure into objection → human re-review → final decision. If conditions such as verified identity, restored consistency, and no recurrence signals are satisfied, relax restrictions step by step

The core elements of actor management can be organized into two points. First, abnormalities are identified based on behavioral patterns. Second, chained abuse is detected using relational cues, such as identical delivery addresses, payment instruments, or devices. In this context, AI is not used to automate enforcement decisions, but rather as a probabilistic signaling mechanism to extract candidates for intervention. At the same time, it is required that the grounds for such signals—contributing factors, thresholds, and relational linkages—be preserved in an explainable form. Furthermore, because the scope of intervention authority, duties, and explanatory obligations varies depending on the allocation of responsibility, the operational conditions of actor management—including consent, purpose limitation, access control, and objection mechanisms—must be aligned with the institutional environment.

Intervention design converts estimated risk into discrete tiers and adjusts the intensity of intervention accordingly. For low-risk cases, convenience such as rapid processing is maintained. For medium-risk cases, measures such as warnings, requests for additional evidence, and an increased share of ex post review are applied. For high-risk cases, options include suspending advance refunds (shifting to refunds after inspection), requiring deposits for returns or shipping, routing all cases to human review, and imposing purchase restrictions. However, high-risk classification itself must not predetermine exclusion. From the perspective of procedural fairness, remedy pathways—including objection, re-review, time-bound restrictions, and the lifting of restrictions after a defined period—must be institutionally embedded.

With this tiered design, convenience is preserved for low-risk cases while keeping misrecognition costs under control, whereas review intensity is increased for medium- and high-risk cases through additional evidence requirements and human involvement. In this way, suppression and procedural fairness can be managed as a trade-off within the operational design.

5.3 Data-driven Update Support for Rule-Updating (Delay) Frictions

Operational friction (3) arises because, as long as loopholes and biased incentive structures remain, abuse adapts and repeats, and rule updating tends to lag. Even if case review and actor management are strengthened, burdens accumulate again when updates are delayed. Therefore, a circuit that collects outcomes as evidence and manages rules in an updatable form is indispensable.

Four points are crucial in update support: (1) early detection of problems; (2) impact evaluation of measures; (3) controlled rollout and monitoring; and (4) recording update decisions. Target data includes not only orders and return requests but also review logs (contradiction types, re-review rate, etc.), actor risk indicators (high-risk share, behavior changes after intervention, etc.), complaints/reports/seller claims, and so forth, which require data matching across sources.

Updating must not be ad hoc experience-based firefighting; it requires iterative revision while simultaneously evaluating effectiveness and side effects. Concretely, platforms monitor category-wise trends in return rates, dispute escalation rates, and compensation costs to identify priority areas. Next, rule-change proposals (e.g., added evidence requirements, conditional refund methods, and revising target categories) are introduced in a limited scope, and tracked not only by return rate but also by legitimate-return protection (processing time, appeal success rate, etc.) and seller burden (handling hours, loss amounts, etc.) at the same time. In light of the remedy-pathway differences organized in the previous chapter, when primary resolution is concentrated within the platform, update pressure and accountability tend to be internalized as the cost of speed. When cases branch easily to external remedies, the clarity of branching conditions and ensuring feedback of outcome data become key to transparency and update design. Therefore, update management must be accompanied by log design and decision records aligned with responsibility/remedy allocation.

Since this study relies mainly on public materials, rigorous effect validation using internal logs remains limited. Accordingly, this section positions the above as a conceptual design of update-management requirements fitted to institutional types.

5.4 Integrating a Closed-loop AI Governance to Reduce the Three-layer Frictions

Even when institutional types (return rights, responsibility allocation, remedy pathways) differ, operational bottlenecks converge on (1) case review, (2) actor management, and (3) rule updating. This section connects the above AI utilization pathways and integrates them as a closed loop. Closed-looping is necessary because even when abusive behaviors adapt to operational standards, feeding back a remedy Outcomes and logs can reduce standard lag.

Figure 2 visualizes the overall configuration proposed in this study and shows the relationships among data inputs, AI modules, Human-in-the-Loop, audit logs, and remedy linkage at each stage of ex-ante prevention, in-process review, and ex-post improvement. The key of the closed loop is a three-step linkage: (1) actor management (intervention proposal) extracts priority targets; (2) case review (cross-check) visualizes judgment through cross-

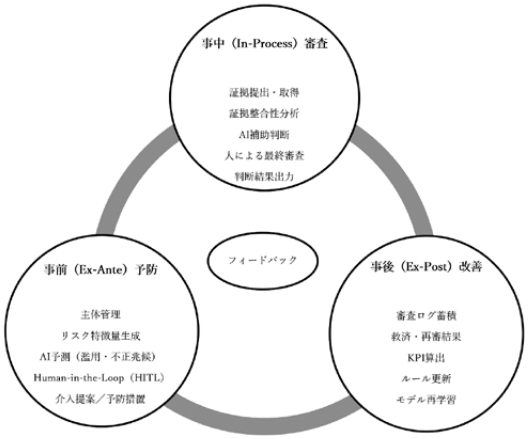

Figure 2. Overall architecture of the closed-loop AI governance framework.

validation and ground-logging; and (3) rule updating (KPI monitoring) iteratively revises standards and procedures based on KPIs. This enables continuous improvement grounded in data, even when abuse adapts to rules.

On the other hand, AI operations entail risks of misjudgment, excessive intervention, and over-surveillance. Therefore, application conditions must be explicit: (1) do not finalize approval/rejection by AI alone (HITL, re-review, ground presentation); (2) continuously monitor fairness KPIs (misjudgment rate, additional evidence request rate, appeal success rate, etc.); and (3) manage logs as accountability evidence under purpose limitation, minimization, and access control. The required level of these conditions should be adjusted according to responsibility types.

Accordingly, AI is positioned not for labor reduction, but as a governance instrument that balances fraud deterrence and protection of legitimate return rights through early risk detection, transparency of judgment (explanation/audit), optimization of resource allocation, and evidence-based updating.

6. Conclusion

This paper compared platform return regimes in China, Japan, and Korea along three functional axes—return rights, responsibility allocation, and remedy pathways—and argued that institutional differences should be evaluated not only as statutory divergences but as differences in how legal status and operational obligations are allocated among consumers, sellers, and platforms. Building on this comparison, the paper reformulated recurring operational bottlenecks as a three-layer structure of operational frictions: (1) misrecognition in case review under incomplete and manipulable evidence, (2) abuse in actor management where interventions must be justified and proportional, and (3) delay in rule updating where standards lag behind evolving behaviors and dispute outcomes. In doing so, the paper provided an analytical bridge that connects institutional design to operational outcomes.

These findings answer the research questions by showing (RQ1) how cross-country differences affect governance requirements, (RQ2) where those differences materialize as frictions in operations, and (RQ3) what roles AI can play when designed as a governance instrument rather than a decision substitute. On this basis, the paper proposed a closed-loop AI governance design that integrates ex-ante prevention, in-process review, and ex-post improvement through shared operational data and feedback. The key contribution is to position AI as an instrument that makes judgment consistent, transparent, and auditable, while preserving human-in-the-loop control, audit-log design, and remedy linkage (appeals/ADR) as non-negotiable conditions across institutional types. At the same time, this study is limited by its reliance on public materials and conceptual design; empirical validation using platform logs, controlled evaluation of misrecognition/abuse reduction, and cross-jurisdictional compliance testing (including data-protection constraints) remain important future work.

Future research should therefore operationalize measurable indicators for each friction layer, evaluate policy and rule-update effects through longitudinal evidence, and test how governance performance changes under different liability and remedy configurations, thereby strengthening the practical applicability of closed-loop AI governance for return operations.

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