

CORRECTIVE DIGITAL INTERMEDIATION IN TOURISM ECOSYSTEMS: A CONCEPTUAL FRAMEWORK FOR THE GROWTH OF AIR PASSENGER RIGHTS PLATFORMS BEYOND DYNAMIC PACKAGING

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ABSTRACT

The digital transformation of tourism has been predominantly theorised through the lenses of online distribution, dynamic packaging and platform-mediated consumption, all of which concentrate analytical attention on the pre-travel phase of search, comparison, assembly and purchase. This paper addresses a parallel and under-theorised phenomenon: the rapid expansion of digital platforms whose value proposition activates only after the travel product has been bought and only when its delivery fails. Firms such as AirHelp, Flightright and AirAdvisor are frequently and imprecisely folded into narratives of tourism digitalisation, yet their growth cannot be explained by dynamic packaging or by any extension of distribution innovation. We argue that these firms constitute a distinct organisational form, which we term the corrective digital intermediary (CDI), and we develop a conceptual framework that locates this form outside the traditional tourism value chain. The framework decomposes the conditions that generate CDIs into four interacting layers (structural volatility, regulatory entitlement, an enforcement gap and platform scalability) and theorises their interaction through a sequence of testable propositions and hypotheses. We further offer an integrative review of four adjacent literatures (tourism distribution, air-transport economics, passenger-rights regulation and platform theory) and synthesise from it a four-type taxonomy of digital intermediaries distinguished by their temporal locus and their relationship to service performance. The framework reframes platform diversity in tourism ecosystems, clarifies why corrective platforms scale where individual enforcement fails, and yields implications for tourism governance, airline strategy and regulatory design. By separating pre-travel optimisation from post-travel correction, the paper contributes a more differentiated account of digital intermediation and platform-based entrepreneurship, identifying a distinct, regulation-driven category of digital venture and setting an agenda for its empirical examination.

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1. Introduction

The study of digital transformation in tourism has matured around a relatively stable explanatory core. Successive waves of research have traced how information technology displaced traditional travel agencies, how online travel agencies (OTAs) and meta-search engines re-intermediated the market, and how dynamic packaging allowed travellers to assemble bespoke combinations of transport, accommodation and ancillary services in real time (O'Connor, 2023; Lv et al., 2020). Almost without exception, this literature is organised around a single temporal locus: the moment before travel, in which demand is generated, products are compared and transactions are completed. The dominant questions concern search costs, price transparency, personalisation, algorithmic ranking and the strategic dependence of suppliers on platform gatekeepers (Stangl et al., 2016; Lei et al., 2019).

Running alongside this well-charted trajectory, however, is a phenomenon that the prevailing frameworks struggle to accommodate. Over the past fifteen years, a category of digital firms has grown rapidly whose entire reason for existing is that the purchased travel product sometimes fails. Companies such as AirHelp, Flightright, AirAdvisor and ClaimCompass do not sell flights, do not assemble packages and do not compete for the traveller's attention at the point of purchase. They become relevant only when a flight is delayed, cancelled or oversold, and their service consists of converting a passenger's latent legal entitlement into an enforced monetary outcome. These firms are routinely described, in trade commentary and even in some scholarship, as part of the broader story of tourism digitalisation. That description is intuitive but, we argue, conceptually mistaken.

The central claim of this paper is that the growth of air passenger rights platforms cannot be explained by dynamic packaging or by any other innovation in tourism distribution. Dynamic packaging and CDIs respond to different problems, occupy different phases of the consumption cycle, draw on different underlying assets and create value through different mechanisms. Treating them as variants of the same digital-distribution trend obscures what is genuinely novel about the corrective platform and impoverishes our understanding of platform diversity in tourism ecosystems.

To substantiate this claim we pursue three connected objectives. First, we conduct an integrative review across four adjacent but rarely combined literatures (tourism distribution, air-transport economics, passenger-rights regulation and platform theory) in order to identify the explanatory gap that corrective platforms occupy. Second, we develop an original conceptual framework that defines the corrective digital intermediary as a distinct organisational form and specifies the four-layer mechanism that brings it into being. Third, we translate the framework into a set of formal propositions and testable hypotheses, and we derive from the review a four-type

taxonomy that situates corrective intermediation relative to the more familiar species of digital intermediary.

The contribution is deliberately conceptual rather than empirical. Our purpose is not to measure the market or to test the propositions with data, but to supply the theoretical scaffolding that such measurement would require. In doing so we follow the conventions of conceptual and theory-building work in tourism and management research, where the value of a paper lies in the clarity of its constructs, the coherence of its relationships and the productiveness of the research agenda it opens (Jaakkola, 2020; MacInnis, 2011). Conceptual papers of this kind do not derive their authority from sample size or statistical inference; they earn it by defining constructs sharply enough that they can later be measured, by specifying relationships precisely enough that they can later be falsified, and by organising disparate evidence into a structure that reveals what previous accounts have missed. The present paper aspires to all three: it names a construct that the literature has gestured at but never defined, it states the relationships among its antecedents in a form that admits empirical refutation, and it synthesises four separate bodies of scholarship into a single explanatory architecture.

A further methodological point deserves emphasis at the outset. The choice of an integrative review, rather than a systematic or bibliometric one, follows directly from the nature of the problem. A systematic review presupposes a bounded field with an established set of questions and methods; it is the right instrument for consolidating what is known within a mature literature. The phenomenon studied here, by contrast, falls between fields, and its very invisibility is a product of disciplinary fragmentation. An integrative review is the appropriate response because its purpose is precisely to combine perspectives from distinct literatures and to generate, rather than merely summarise, theory (Snyder, 2019; Torraco, 2005). The four literatures we draw upon were selected not because they overlap but because each contributes one necessary premise to an argument none of them completes alone. To ensure currency, the synthesis was cross-checked against recent AI-assisted evidence syntheses of each literature, which confirmed that the most recent scholarship continues to treat distribution, disruption, regulation and platform governance in isolation rather than as a single explanatory chain.

This reframing matters for the study of digital innovation and entrepreneurship, not only for tourism distribution. Corrective digital intermediaries are, in entrepreneurial terms, a new venture type: firms that discover and exploit an opportunity created not by unmet consumer desire but by institutional failure, building scalable digital businesses on the gap between a legal right and its realisation. Understanding how such ventures emerge, why they scale and where their opportunity space comes from speaks directly to research on digital entrepreneurship, platform business models and technology-enabled service innovation. The framework developed here

therefore contributes to the broader entrepreneurial-research agenda by identifying a distinct, regulation-driven category of digital venture and specifying the conditions under which it becomes viable.

The remainder of the paper is organised as follows. Section 2 sets out the methodological approach and reviews the four literatures, isolating the explanatory gap. Section 3 presents the conceptual framework and its four constitutive layers. Section 4 develops the propositions and hypotheses. Section 5 sets out the taxonomy of digital intermediaries. Section 6 discusses theoretical, managerial and policy implications. Section 7 acknowledges limitations and sketches an agenda for empirical work, and Section 8 concludes.

2. Theoretical Background and Methodological Approach

2.1. Methodological Approach

This study adopts a conceptual, theory-building design rather than an empirical one. Following established guidance on conceptual contributions (Jaakkola, 2020; MacInnis, 2011), the paper combines two of Jaakkola's templates: theory synthesis, which integrates evidence from several literatures into a coherent account, and typology, which organises a phenomenon into a structured classification. The synthesis is grounded in an integrative literature review, the appropriate method when the goal is to combine perspectives from distinct fields and generate new theory rather than to summarise a mature one (Snyder, 2019; Torraco, 2005). Four bodies of scholarship were purposively selected because each supplies one necessary premise of the argument: tourism distribution, air-transport economics, passenger-rights regulation and platform theory. Sources were identified through database searching and citation chaining, prioritising recent peer-reviewed work, and were synthesised thematically around the conditions that give rise to corrective platforms. To ensure currency, the synthesis was cross-checked against recent AI-assisted evidence syntheses of each literature, which confirmed that the most recent scholarship continues to treat these domains in isolation rather than as a single explanatory chain. The output of this process is the framework, propositions and taxonomy developed in Sections 3 to 5.

An integrative review is appropriate where the aim is not to catalogue a settled field but to bring together fragments from several fields in order to generate a new conceptualisation (Snyder, 2019; Torraco, 2005). The phenomenon of corrective intermediation sits at the intersection of four literatures that have developed largely in isolation from one another. Reviewing them together reveals a recurring blind spot: each illuminates part of the conditions that produce corrective platforms, yet none accounts for the platform form itself.

2.2. Tourism Distribution and the Pre-Travel Bias

Tourism distribution research has long been organised around the function of intermediation, that is, the reduction of information asymmetry, the aggregation of fragmented supply and the facilitation of transactions between producers and consumers (O'Connor, 2023). The diffusion of digital technologies was first interpreted as a threat of disintermediation, as suppliers gained direct access to consumers; subsequent evidence showed instead a process of re-intermediation, in which platform actors such as OTAs and meta-search engines came to dominate the distribution landscape by centralising demand, exploiting network effects and coordinating supply through data (Kim & Cho, 2024; Nazmabadi, 2025). These actors reconfigured the balance of power within tourism value chains, gaining control over visibility, price comparison and consumer attention, and shaping supplier strategies around availability and brand positioning (Stangl et al., 2016; Lei et al., 2019).

Dynamic packaging is the apex of this trajectory. Rather than offering pre-defined bundles, dynamic packaging systems allow consumers to assemble personalised combinations of components in real time, enabled by semantic interoperability, application programming interfaces and inventory synchronisation (Agarwal et al., 2013; Reino et al., 2016; Lv et al., 2020). Recent work frames these web APIs as the structuring infrastructure of the entire online-travel ecosystem, enabling decentralised co-production and rapid reconfiguration of service networks without supplier lock-in (Pujadas et al., 2024). Artificial intelligence has deepened the model through personalised recommendation, demand prediction and dynamic pricing (Lim & Kim, 2025; Zhu et al., 2023), and the model aligns economically with the broader unbundling of services in air transport, where airlines have progressively separated core and ancillary products and transferred assembly decisions to consumers (Granados et al., 2012). The distribution literature has itself begun to map the appearance of new agents and intermediation roles within this ecosystem (Fernández-Villarán & Cuenca, 2023; Kim & Cho, 2024), yet these accounts remain firmly anchored in the pre-purchase phase of search, bundling and booking.

For all its sophistication, this literature exhibits a consistent pre-travel bias. Dynamic packaging, OTAs and AI-driven recommendation systems are concerned almost exclusively with optimising decision-making and transaction efficiency before consumption begins. Implicit in the entire apparatus is the assumption that, once a product is purchased, delivery will occur as expected. The literature therefore explains how travellers assemble and buy journeys, but it has nothing to say about what happens, or what institutions arise, when the journey fails.

This bias is reinforced, not corrected, by the parallel literature on generational change in travel behaviour. Research on

younger cohorts, Millennials and Generation Z, documents a strong orientation toward autonomy, flexibility, continuous connectivity and real-time control over itineraries, expectations that distribution platforms have rushed to satisfy (Amaro & Duarte, 2015; Foroughi et al., 2025). Social media, user-generated content and peer review embed travel decisions within everyday digital practice and push distribution systems toward non-linear, iterative purchase journeys (Varkaris & Neuhofer, 2017; Chen, 2025). The growth of remote and hybrid work has further expanded the temporal and spatial reach of travel and intensified demand for modular, customisable products. Yet this entire stream of work concerns empowerment before travel. The same digitally fluent traveller who assembles a complex itinerary with ease is, the evidence shows, no more competent at navigating a compensation claim when the itinerary collapses. Digital empowerment in the pre-travel phase coexists with digital disempowerment during service failure, a paradox the distribution literature notes in passing but never theorises, because its analytical gaze does not extend past the point of sale.

2.3. Air-Transport Economics and Structural Volatility

The air-transport economics literature supplies precisely the missing premise. Two decades of liberalisation, intensified competition and efficiency-oriented business models have produced carriers that operate with high aircraft utilisation, dense scheduling, complex network architectures and extensive outsourcing of ground services. These strategies improve cost efficiency but simultaneously erode operational slack and system resilience. Tightly coupled systems of this kind are inherently vulnerable to cascading failure: a localised disturbance, whether weather, crew shortage or a technical fault, can propagate rapidly across a network and generate widespread delay and cancellation (Granados et al., 2012). A growing body of network-science research formalises this intuition, showing how disruptions diffuse nonlinearly through interdependent airports and flights and how recovery depends on network topology (Li et al., 2022; Wandelt et al., 2025). Indeed, recent work reframes flight cancellations not as isolated incidents but as indicators of a nonlinear operational transition that occurs once system stress exceeds adaptive capacity (Momtaz, 2026), while empirical studies of extreme weather demonstrate the scale at which delay and cancellation propagate across national networks (Bombelli & Sallan, 2023). Climate change compounds the problem by raising the frequency of extreme weather events that disrupt operations and airport capacity (Horne et al., 2023).

The systemic implication is that contemporary air transport has become a high-efficiency, low-resilience system in which reliability is structurally difficult to guarantee. Service failure is not an aberration to be designed away but a recurrent, statistically predictable feature of the system. This is the

supply-side condition that creates a continuous stream of disrupted passengers, and therefore a continuous flow of potential claims. Yet the air-transport literature treats disruption mainly as an operational and welfare problem; it does not theorise the market institutions that form to process the claims disruption generates.

The same literature, viewed through the lens of the travel experience, also clarifies why disruption matters disproportionately. The travel experience is conventionally modelled as a sequence of touchpoints across pre-travel, during-travel and post-travel phases. Distribution technologies optimise the first; disruption strikes the second, when the traveller is most exposed and least able to act. Service failures in air transport have an outsized effect on satisfaction, trust and loyalty relative to failures in other tourism components, and they generate secondary losses, such as missed connections, additional accommodation, lost working days and emotional strain, that often exceed the direct cost of the disrupted flight (Varkaris & Neuhofer, 2017). For travellers who combine work and leisure, whose tolerance for delay is low because delay interferes with professional obligations, the welfare loss is sharper still. From the passenger's standpoint, disruption is a moment of acute vulnerability marked by uncertainty, limited control and a pronounced asymmetry of information and expertise in the airline's favour. The air-transport literature describes this vulnerability vividly; what it does not do is connect it to the institutional response it provokes.

2.4. Passenger-Rights Regulation and the Enforcement Gap

The regulatory literature describes the entitlement side of the equation. European Union Regulation 261/2004 is among the most comprehensive passenger-protection regimes in the world, formalising rights to assistance and compensation in cases of denied boarding, long delay and cancellation, and seeking to rebalance power between airlines and passengers by internalising part of the cost of service failure. Successful judicial interpretations, particularly around the contested notion of “extraordinary circumstances,” have extended the scope of compensation but also multiplied legal complexity.

Crucially, scholarship and policy evaluation converge on a gap between formal entitlement and practical realisation. Airlines routinely contest claims, shift the burden of proof onto passengers and prolong resolution, exploiting the persistent ambiguity of the “extraordinary circumstances” defence that recent legal scholarship identifies as the central source of uncertainty in the regime (Pazos, 2021; Drake, 2020). Behavioural and technology-acceptance research shows that, even when consumers are aware of their rights, perceived complexity and low self-efficacy sharply reduce the likelihood that they act (Ramayah et al., 2013; Vijayasarathy, 2004). Cross-border travel adds linguistic, jurisdictional and procedural barriers, and

national enforcement bodies apply the rules unevenly across Member States (Drake, 2020). The consequence is an enforcement gap: a large proportion of eligible passengers never claim, and the costs of disruption are silently externalised from carriers back to consumers. The regulation thus functions as latent protection: robust in principle, weak in individual-level implementation, a diagnosis that has prompted explicit calls to rethink the regulation itself (Brecke, 2025). The regulatory literature names this gap but stops short of explaining the firms that monetise its closure.

2.5. Platform Theory and the Form of Intermediation

Platform theory supplies the final piece: a vocabulary for the organisational form. Digital platforms are commonly theorised as multi-sided structures that create value by lowering transaction and coordination costs between distinct groups, by accumulating and exploiting data, and by exhibiting scale economies and network effects (Münter, 2025; Reino et al., 2016). A growing strand emphasises that such platforms are not passive conduits but active market-makers that structure triangular contractual relationships and shape outcomes through algorithmic governance (Gleiss et al., 2023), to the point that some are best understood as “false intermediary platforms” bearing responsibility for the transactions they orchestrate (Gastaminza, 2025). Most applications in tourism describe transaction platforms that match supply and demand before consumption. Platform theory more broadly, however, also encompasses intermediaries that aggregate dispersed and individually low-value claims, standardise their assessment and pursue them at scale, a logic now visible in legal-technology and claims-aggregation markets and in emerging accounts of automating consumer-rights enforcement (Samek, 2025). This is the conceptual resource that allows corrective intermediation to be specified, but it has not previously been con-

nected to the tourism and air-transport conditions described above.

Two features of platform economics are especially pertinent. The first is the role of marginal cost. A platform’s competitive advantage in claims processing rests on driving the marginal cost of handling one additional claim toward zero through automation, so that a portfolio of individually unremunerative cases becomes collectively profitable. The second is the role of the contingent-fee or no-win-no-fee contract, which transfers risk from the consumer to the platform and thereby dissolves the principal behavioural barrier, namely the consumer’s reluctance to invest effort and money in an uncertain outcome. Platform theory thus explains not only that aggregation is possible but why a particular contractual and cost structure makes it commercially compelling. What platform theory does not supply, on its own, is the demand-side story: it can describe how a corrective platform works once it exists, but not why the conditions for its existence arise. That story comes from the other three literatures, and joining them is the analytical work the next section performs.

2.6. The Explanatory Gap

Read together, the four literatures describe the necessary conditions for corrective platforms without ever naming the platform itself. Air-transport economics explains why disruption is endemic. Regulation explains why disruption generates entitlements. Behavioural and regulatory scholarship explains why those entitlements go largely unclaimed. Platform theory explains how dispersed claims can be aggregated and processed at scale. What no single literature provides is an account that joins these strands into a coherent explanation of a new organisational form positioned after purchase and outside the distribution chain. Filling that gap is the task of the framework developed next.

Table 1

The four contributing literatures and the explanatory gap.

Literature	What it explains	What it omits
Tourism distribution	How journeys are assembled and purchased; pre-travel optimisation	Anything occurring after purchase or after service failure
Air-transport economics	Why disruption is endemic in low-resilience systems	The market institutions that process disruption claims

(continued on next page)

Table 1 (continued)

Literature	What it explains	What it omits
Passenger-rights regulation	Why disruption creates legal entitlements; the enforcement gap	The firms that monetise closure of the gap
Platform theory	How dispersed claims can be aggregated at scale	The specific post-purchase, extra-chain positioning

3. Conceptual Framework: The Corrective Digital Intermediary

3.1. Defining the Construct

We define a corrective digital intermediary (CDI) as a digital platform whose value proposition is activated only by the failure of a previously purchased service, and which creates value by converting a consumer's latent legal or contractual entitlement into an enforced outcome at scale. Three elements distinguish the construct. First, temporal locus: the CDI operates after purchase and during or after consumption, not before. Second, conditional activation: its service has zero relevance when delivery succeeds and becomes valuable only upon failure. Third, corrective rather than allocative function: it does not allocate or assemble products but repairs the consequences of defective allocation, redistributing value from the underperforming supplier back to the consumer.

The CDI is therefore not a distribution intermediary in any conventional sense. A distribution intermediary stands between supply and demand to facilitate exchange; a corrective intermediary stands between a consumer and a non-performing supplier to enforce a remedy. The two are orthogonal: a market could in principle have rich distribution intermediation and no corrective intermediation, or vice versa. Recognising this orthogonality is the conceptual move that separates the growth of AirHelp from the growth of dynamic packaging.

It is worth dwelling on each of the three defining elements, because together they generate the framework's predictions. The temporal locus inverts the usual direction of intermediary attention. Distribution intermediaries compete for the consumer at the front of the journey, when many alternatives are live and switching is costless; corrective intermediaries meet the consumer at the back, when the transaction is complete, the alternatives are foreclosed and the only remaining decision is whether and how to seek redress. Conditional activation means the corrective intermediary's addressable demand is not the population of travellers but the much smaller population of travellers whose service has failed and who hold an unreal-

ised entitlement, a demand that is invisible to, and uncorrelated with, the demand that distribution platforms cultivate. The corrective rather than allocative function means the value the platform creates is redistributive: it does not enlarge the pie by improving matching but reallocates a slice of it from a supplier that has underperformed back to the consumer the supplier has failed. These three properties are not incidental descriptors; they are the premises from which the framework's propositions follow.

3.2. The Four-Layer Generative Mechanism

We theorise the emergence and growth of CDIs as the product of four interacting layers. Each layer is individually insufficient; the CDI form emerges only when all four are jointly present, and the rate of CDI growth is governed by their interaction.

3.2.1. Layer 1: Structural volatility

The first layer is a supply system that produces service failure at a predictable, non-trivial rate. In air transport this is the high-efficiency, low-resilience configuration described in Section 2.2: dense scheduling and minimal slack guarantee a steady flow of delays and cancellations (Granados et al., 2012; Horne et al., 2023). Structural volatility supplies the raw material of corrective intermediation: a continuous population of failure events. Where a supply system is highly resilient and failures are rare, the raw material is insufficient to sustain a corrective platform, regardless of the other layers.

3.2.2. Layer 2: Regulatory entitlement

The second layer is an institutional rule that attaches a transferable, monetisable entitlement to the failure event. EU Regulation 261/2004 is the paradigmatic case: it converts a delay or cancellation from a mere inconvenience into a defined legal claim with a monetary value. Without such an entitlement, a failure event generates dissatisfaction but no enforceable asset for a platform to pursue. The entitlement is what makes the

failure tradable. The clarity, scope and monetary level of the entitlement directly condition the attractiveness of the corrective market, and judicial extension of the regime's extraterritorial reach to third-country carriers has progressively widened the pool of monetisable claims (Satayanurug, 2025).

3.2.3. Layer 3: The Enforcement Gap

The third layer is the wedge between formal entitlement and actual enforcement. As Section 2.3 establishes, most eligible passengers never claim, deterred by complexity, low self-efficacy, supplier resistance and cross-border friction (Ramayah et al., 2013; Vijayasathy, 2004). The enforcement gap is the decisive layer: it is simultaneously the social problem the CDI addresses and the economic space it occupies. A wide gap means a large stock of unclaimed entitlements and a high willingness among consumers to delegate enforcement in exchange for a contingent fee. Paradoxically, the CDI's commercial opportunity is largest precisely where the regulation is least effective at the individual level.

3.2.4. Layer 4: Platform Scalability

The fourth layer is the technical and organisational capacity to process individually low-value, high-volume claims at near-zero marginal cost. This is the platform contribution: automated eligibility assessment against flight databases, standardised claim generation, mass submission, and the internalisation of legal and procedural complexity, increasingly supported by rule-based and machine-learning systems for claim justification and verification and by hybrid models that pair automation with human review of complex cases (Samek, 2025). Offered under a no-win-no-fee model that removes the consumer's up-front risk, this capability transforms a fragmented mass of trivial individual claims, each too small to justify private legal action, into an aggregated portfolio that is commercially viable. It is the mechanism that turns the latent demand created by Layers 1–3 into a realised market.

3.3. Interaction and the Multiplicative Logic

The four layers do not combine additively but multiplicatively. If any layer approaches zero, the realised size of the corrective market approaches zero, irrespective of the others. A highly volatile system with no regulatory entitlement (Layer 2 absent) produces angry passengers but no tradable claims. A generous entitlement that is trivially easy to enforce (Layer 3 absent) leaves no gap for an intermediary to occupy, because passengers simply claim for themselves. A wide enforcement gap with no scalable technology (Layer 4 absent) leaves the claims uncollected, as the pre-platform status quo demonstrated. We therefore express the latent magnitude of the corrective market as a conceptual product:

$$M_k \approx V \times R \times G \times S$$

where M_k is the latent corrective-market magnitude, V indexes structural volatility (the rate of failure events), R indexes the strength and monetary value of the regulatory entitlement, G indexes the width of the enforcement gap, and S indexes platform scalability. The multiplicative form captures the central theoretical intuition that the four layers are jointly necessary and individually insufficient, and that corrective intermediation is a genuinely emergent property of their interaction rather than the extension of any one of them. This logic deliberately mirrors, in a different domain, the recognition in capacity research that effective outcomes emerge from the interaction of several dimensions rather than from any single parameter (cf. Cifuentes, 1992).

3.4. Positioning Outside the Tourism Value Chain

A defining feature of the CDI is that it sits outside the traditional tourism value chain. The classical chain runs from suppliers through distribution intermediaries to the consumer and terminates at the point of consumption. The CDI attaches not to this forward flow of products but to a reverse flow of remedies that opens only when consumption is defective. It has no contractual relationship with the supplier it acts against, depends on no inventory and competes for none of the attention that OTAs and packaging platforms fight over. Its counterpart is not a competing distributor but the non-performing supplier and, behind it, the regulatory regime. This extra-chain positioning is why corrective growth is decoupled from distribution growth: the two respond to different signals and can move independently.

3.5. Visual Summary of the Framework

The framework can be summarised as a layered, conditional pipeline. Structural volatility (Layer 1) generates a stream of failure events; regulatory entitlement (Layer 2) attaches a tradable claim to each event; the enforcement gap (Layer 3) determines how many of those claims remain unclaimed and thus available; and platform scalability (Layer 4) determines how efficiently the available claims are converted into enforced outcomes. The realised corrective market is the throughput that survives all four gates. Figure 1 below illustrates this pipeline and the multiplicative logic that governs it. Table 2 expresses the same structure in propositional form, mapping each layer to its function, its absence-condition and its empirical proxy.

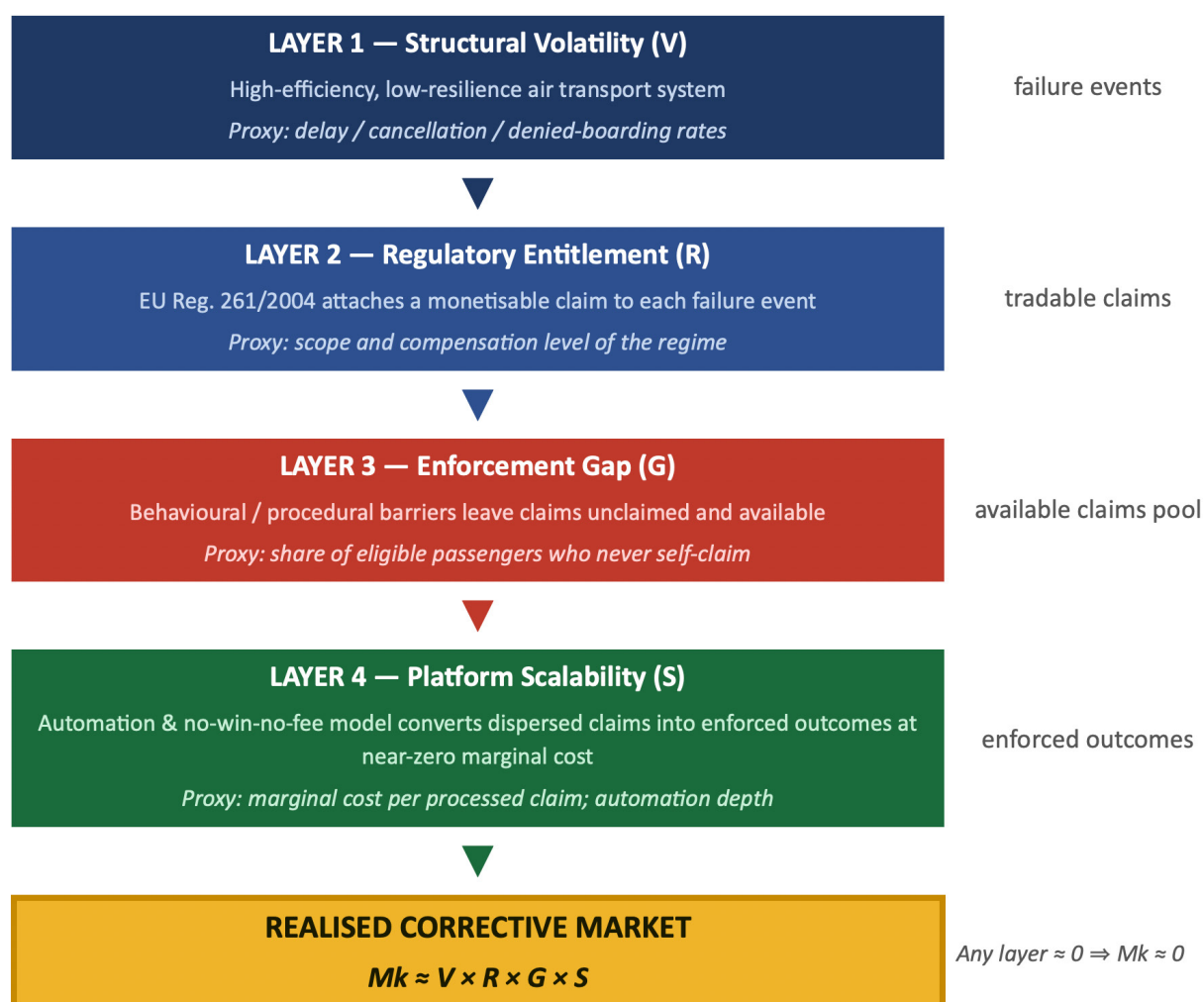


Figure 1: The four-layer conditional pipeline of corrective digital intermediation.

Note: The four layers are conjunctively necessary. The absence of any single layer is sufficient to prevent CDI emergence, regardless of the strength of the others.

Table 2

The four-layer generative mechanism of corrective digital intermediation.

Layer	Function in the mechanism	If absent	Indicative empirical proxy
1. Structural volatility (V)	Generates the stream of service-failure events	No raw material for claims	Delay / cancellation / denied-boarding rates
2. Regulatory entitlement (R)	Attaches a tradable, monetisable claim to each failure	Dissatisfaction but no enforceable asset	Scope and compensation level of the regime
3. Enforcement gap (G)	Leaves entitlements unclaimed and thus available	Consumers self-enforce; no space for intermediary	Share of eligible passengers who never claim
4. Platform scalability (S)	Converts dispersed claims into enforced outcomes at scale	Claims remain uncollected (pre-platform status quo)	Marginal cost per processed claim; automation depth

4. Theoretical Development: Propositions and Hypotheses

The framework yields a structured set of theoretical claims. We state the broad, relational claims as propositions (P) intended for conceptual elaboration, and the narrower, directly measurable claims as hypotheses (H) intended for empirical testing. The propositions articulate the framework's core logic; the hypotheses operationalise selected relationships for future quantitative work.

4.1. Core Propositions

Proposition 1 (Distinct domain). The growth of air passenger rights platforms is independent of innovation in tourism distribution; corrective intermediation and distribution intermediation respond to different signals and can grow at different, uncorrelated rates.

Proposition 2 (Conjunctive emergence). Corrective digital intermediaries emerge only when structural volatility, regulatory entitlement, an enforcement gap and platform scalability are jointly present; the absence of any single layer is sufficient to prevent emergence.

Proposition 3 (Multiplicative magnitude). The latent magnitude of a corrective market is multiplicative rather than additive in the four layers, such that the marginal effect of strengthening one layer increases with the strength of the others.

Proposition 4 (Enforcement-gap dependence). The commercial opportunity available to a corrective intermediary is increasing in the width of the enforcement gap; corrective platforms therefore thrive where individual-level regulatory enforcement is weakest.

Proposition 5 (Extra-chain positioning). Because the corrective intermediary operates outside the tourism value chain and without a contractual link to the supplier it acts against, its strategic constraints and competitive dynamics differ qualitatively from those of distribution intermediaries.

Proposition 6 (Regulatory reflexivity). Changes that narrow the enforcement gap by simplifying direct claiming, for example automated airline-initiated compensation, reduce the addressable market of corrective intermediaries, creating a reflexive tension between regulatory success and platform viability.

4.2. Testable Hypotheses

The following hypotheses translate the propositions into relationships amenable to empirical examination using route-level, carrier-level or jurisdiction-level data.

H1. Across jurisdictions, the volume of third-party compensation claims is positively associated with the strength and monetary level of the applicable passenger-rights regime (oper-

ationalising Layer 2 / R).

H2. Controlling for traffic volume, corrective-platform claim volumes are positively associated with carrier or route disruption rates (operationalising Layer 1 / V).

H3. The market penetration of corrective platforms is positively associated with measures of the enforcement gap, such as the proportion of eligible passengers who do not self-claim (operationalising Layer 3 / G).

H4. The growth rate of corrective-platform activity is statistically independent of the growth rate of dynamic-packaging and OTA activity within the same market and period (testing Proposition 1).

H5. The interaction term between disruption rate and regulatory strength explains variance in claim volume beyond their additive contributions, consistent with a multiplicative rather than additive specification (testing Proposition 3).

H6. Regulatory or technological interventions that lower the cost of direct self-claiming are followed by a decline in the addressable market and growth rate of corrective platforms (testing Proposition 6).

4.3. A Nomological Sketch

Taken together, the propositions and hypotheses form a nomological network in which the four layers act as antecedents, the latent corrective-market magnitude acts as the focal construct, and observable platform outcomes (claim volume, market penetration and growth rate) act as consequents. Proposition 1 and H4 establish discriminant validity against the distribution-innovation account; Propositions 2–3 and H5 specify the functional form of the antecedent–construct relationship; Proposition 4 and H3 isolate the enforcement gap as the pivotal antecedent; and Proposition 6 and H6 introduce a dynamic, reflexive boundary condition. This structure is intended to be falsifiable: a finding that corrective and distribution growth are strongly correlated, or that an additive specification fits better than a multiplicative one, would count as evidence against the framework.

Two methodological cautions attend this network and are worth stating so that future tests are interpreted correctly. First, several of the antecedents are difficult to observe directly and must be approached through proxies, such as disruption rates for volatility, regime characteristics for entitlement and non-claiming shares for the enforcement gap, each of which carries measurement error that will tend to attenuate estimated relationships; a failure to find an effect should therefore be read cautiously rather than as decisive refutation. Second, the layers are not fully independent of one another in practice. A regulator that strengthens entitlement (Layer 2) may simultaneously act to narrow the enforcement gap (Layer 3), inducing a negative empirical correlation between two layers that the framework treats as conceptually distinct. Careful design, exploiting jurisdictions or periods in which the layers move

separately, is therefore essential to identify the multiplicative interaction the framework predicts. These cautions do not weaken the network; they specify the conditions under which it can be fairly tested.

5. Results of the Synthesis: A Taxonomy of Digital Intermediaries

The framework implies that the familiar category of “digital

intermediary” conflates organisational forms that differ along two fundamental dimensions. The first dimension is temporal locus: whether the intermediary acts before or after the moment of consumption. The second is the relationship to service performance: whether the intermediary’s value depends on successful delivery or, conversely, is activated by failure. Crossing these two dimensions yields a four-cell taxonomy that locates corrective intermediation precisely and distinguishes it from its neighbours.

Table 3

A two-dimensional taxonomy of digital intermediaries in tourism ecosystems.

	Value depends on successful delivery	Value activated by service failure
Pre-consumption (before purchase / travel)	Type I: Allocative intermediaries: OTAs, meta-search, dynamic-packaging platforms; assemble and sell journeys	Type II: Protective intermediaries: travel-insurance and pre-purchase guarantee platforms; price the risk of failure in advance
Post-consumption (during / after travel)	Type III: Experiential intermediaries: review, reputation and loyalty platforms; capture value from successful experiences	Type IV: Corrective intermediaries (CDIs): air passenger rights platforms; enforce remedies when delivery fails

5.1. The Four Types

Type I, **allocative intermediaries**, are the subject of almost all existing tourism-distribution research. They operate before purchase and create value precisely when delivery is expected to succeed; their entire apparatus of search, comparison and assembly presupposes a functioning supply chain. OTAs, meta-search engines and dynamic-packaging platforms belong here (Lv et al., 2020; Agarwal et al., 2013).

Type II, **protective intermediaries**, also act before consumption but, unlike allocative intermediaries, derive value from the possibility of failure. Travel insurance and pre-purchase guarantee products price disruption risk in advance and pay out when it materialises. They share the failure-orientation of corrective intermediaries but differ in temporal locus: the consumer engages them prospectively, before knowing whether failure will occur.

Type III, **experiential intermediaries**, operate after consumption but capture value from success rather than failure. Review platforms, reputation systems and loyalty schemes monetise the traces of completed, broadly satisfactory experiences. They occupy the same post-consumption phase as corrective intermediaries but are mirror images in performance-orientation.

Type IV, **corrective intermediaries**, complete the matrix. They are the only type that combines a post-consumption

temporal locus with a failure-activated value proposition. This unique combination is what makes them analytically distinct and what explains why they cannot be assimilated to the Type I distribution platforms with which they are commonly confused. The taxonomy thus does more than classify: it demonstrates, by construction, that corrective intermediation occupies a cell that distribution theory has left empty.

5.2. Boundary Conditions and Hybrids

Real firms may occupy more than one cell or migrate between them. An OTA that bundles a disruption-compensation service is combining Type I and Type IV functions; an insurer that automates post-failure claim handling is bridging Types II and IV. The taxonomy is not a claim that firms are pure types but an analytical device for identifying the functions a firm performs and the distinct logics each function obeys. Hybridity, far from undermining the scheme, is most usefully described as the deliberate combination of analytically separable cells, and the strategic tensions of hybrid firms (for instance, an OTA enforcing claims against carriers on which it also depends for inventory) become visible only once the cells are distinguished.

6. Discussion and Implications

6.1. Theoretical Implications

The framework makes three theoretical contributions. First, it introduces the corrective digital intermediary as a distinct construct and supplies the criteria (post-purchase locus, conditional activation, corrective function and extra-chain positioning) that separate it from the allocative intermediaries that dominate the literature. Second, it specifies a generative mechanism in which four layers combine multiplicatively, offering a falsifiable functional form rather than a loose list of contributing factors. Third, by deriving a two-dimensional taxonomy, it reframes the entire category of digital intermediation in tourism, revealing that existing theory has populated only one of four cells and largely ignored the others.

More broadly, the paper contributes to platform theory by identifying a class of platforms whose distinctive property is conditional, failure-activated value. Most platform scholarship theorises value creation under successful matching; corrective platforms invert this, creating value only when prior matching has failed. This inversion suggests that platform theory itself may benefit from a temporal and performance-conditional refinement of the kind the taxonomy provides.

6.2. Managerial Implications

For corrective platforms, the framework clarifies the strategic terrain. Because their addressable market is the product of four layers, their growth depends on factors largely outside their control, namely disruption rates and regulatory design, and on one factor squarely within it: scalability. Competitive advantage therefore concentrates on automation depth, data access to flight records, breadth of jurisdictional coverage and the credibility of the no-win-no-fee promise. Proposition 6 warns these firms of a structural vulnerability: their market shrinks precisely to the extent that regulation succeeds in making self-claiming easy, so durable strategy must anticipate diversification beyond any single regime.

For airlines and traditional tourism distributors, the framework reframes corrective platforms not as competitors but as a recurring, externally imposed cost of unreliable delivery. Carriers can reduce that cost in two ways: by lowering structural volatility, which is operationally hard, or by narrowing the enforcement gap through proactive, automated compensation, which removes the intermediary's margin. For OTAs and packaging platforms contemplating hybrid corrective services, the taxonomy exposes the conflict of interest inherent in enforcing claims against suppliers on which they also depend.

The framework also clarifies a strategic asymmetry that is easily overlooked. Distribution platforms and corrective platforms compete for entirely different scarce resources. The binding constraint for an OTA is consumer attention and supplier

inventory at the front of the journey; the binding constraint for a corrective platform is data access, automation depth and jurisdictional reach at the back of it. Because these constraints do not overlap, the two forms can coexist indefinitely without direct rivalry, and a firm attempting to span both must manage two unrelated capability stacks rather than extend a single one. This is a further reason to resist the common framing of corrective platforms as a natural “next step” for distribution incumbents: the step is lateral, not forward, and it lands the firm in a market whose success conditions it does not already control. Managers who internalise the four-layer logic will evaluate entry into corrective intermediation by asking not whether they have distribution strength but whether the four layers are jointly present in the markets they would serve.

6.3. Policy Implications

For regulators the framework carries a pointed and somewhat uncomfortable message. The very existence of a thriving corrective-intermediation market is evidence of a regulatory enforcement gap: a well-functioning regime in which entitlements were easy to realise would leave little room for intermediaries to profit from realising them. Corrective platforms are, in this sense, a market-based symptom of incomplete public enforcement. Policy responses divide accordingly. Regulators who wish to suppress the intermediary market should attack Layer 3 directly, mandating automatic, airline-initiated compensation so that passengers need not claim at all, an option already foreshadowed by rulings permitting airlines to compensate passengers directly and by debates over curbing claims-management intermediation (Thijssen & Williams, 2019). Regulators who instead treat corrective platforms as useful private enforcers should focus on protecting consumers within that market by capping fees, ensuring transparency and policing aggressive practices, while the parallel expansion of alternative and online dispute resolution offers a complementary, lower-cost channel for redress (Hipp, 2019). Either way, the framework makes explicit that the size of the corrective market is a policy choice expressed through the width of the enforcement gap.

7. Limitations and Research Agenda

As a conceptual contribution, the paper has the limitations characteristic of theory-building work. Its constructs and relationships are argued rather than measured, and the multiplicative functional form, though theoretically motivated, awaits empirical adjudication against additive alternatives. The framework is calibrated to the European air-transport context, where Regulation 261/2004 provides an unusually strong and well-defined entitlement; its transferability to weaker regulatory regimes, to other transport modes or to non-transport service failures is a matter for investigation rather than assumption.

tion. The taxonomy, likewise, is an analytical scheme whose cells and boundaries should be tested against the messy reality of hybrid firms.

These limitations define a research agenda. First, the hypotheses in Section 4 invite empirical testing with cross-jurisdictional, route-level and carrier-level data, particularly H4 and H5, which respectively probe the independence of corrective and distribution growth and the multiplicative form of the mechanism. Second, comparative work across regulatory regimes would illuminate the enforcement-gap mechanism by exploiting variation in entitlement strength. Third, the reflexive dynamic of Proposition 6, the tension between regulatory success and platform viability, could be examined through natural experiments around the introduction of automatic-compensation rules. Fourth, the construct of corrective intermediation should be tested for portability beyond air transport, to domains such as parcel logistics, telecommunications and energy, where structural volatility, regulatory entitlement and enforcement gaps may coexist. Finally, qualitative study of hybrid firms would refine the boundary conditions of the taxono.

A further limitation, and perhaps the most consequential for the framework's global reach, concerns the behaviour of the conceptual product $M_k \approx V \times R \times G \times S$ in geographies with substantially weaker or more fragmented legal regimes than the European one. The framework is calibrated to EU Regulation 261/2004, which supplies an unusually high value of R : the entitlement is clearly defined, the compensation amounts are fixed, and the judicial infrastructure for enforcement is mature. In contexts where R is low — for instance, in jurisdictions with nascent passenger-rights legislation, ambiguous compensation thresholds, or poor judicial access — the multiplicative logic predicts that even high values of V , G and S will fail to produce a commercially viable corrective market. This is not because disruption is less frequent or consumers less aggrieved, but because the entitlement layer is too thin to generate a tradable asset of sufficient value to sustain a platform's contingent-fee economics. In the ASEAN air transport context, Satayanurug's (2025) analysis of the extraterritorial limits of EC261 illustrates precisely how the absence of a comparable regional entitlement regime suppresses the corrective market despite high levels of structural volatility. In the United States, the patchwork character of federal consumer-protection rules and the dependence on Department of Transportation enforcement rather than individual private rights of action creates a configuration in which G is high but R is institutionally fragmented, generating a corrective market that is active but structurally constrained relative to the European case. These observations suggest that the portability of the CDI framework is better understood as a function of regulatory infrastructure strength rather than aviation market size or disruption frequency alone: CDIs scale where R provides a robust, monetisable floor. Future work should therefore test

whether the multiplicative form degenerates predictably as R approaches zero and whether hybrid institutional arrangements — such as private ombudsman schemes or contractual guarantee products — can partially compensate for a thin entitlement layer, effectively elevating R endogenously.

8. Conclusion

This paper began from a simple observation that the prevailing theory of tourism digitalisation cannot accommodate: that a class of fast-growing digital firms creates value only when the travel product fails. We have argued that these firms, air passenger rights platforms such as AirHelp, constitute a distinct organisational form, the corrective digital intermediary, whose growth is independent of, and explained by entirely different forces from, the dynamic packaging and distribution innovations with which they are routinely conflated.

The framework developed here locates the corrective intermediary outside the tourism value chain and accounts for its emergence through four interacting layers (structural volatility, regulatory entitlement, an enforcement gap and platform scalability) whose multiplicative interaction determines the latent magnitude of the corrective market. From this mechanism we derived a set of propositions and testable hypotheses and a two-dimensional taxonomy that reveals corrective intermediation as the previously empty cell of digital intermediation theory.

The broader contribution is a more differentiated understanding of platform diversity in tourism ecosystems. Distribution platforms and corrective platforms are not points on a single continuum of digitalisation but distinct species occupying different phases of the consumption cycle and obeying different logics. Recognising this distinction sharpens theory, redirects managerial attention and, perhaps most consequentially, reframes the existence of corrective platforms as a measurable signal of where public enforcement of consumer rights falls short. As nature-based and mass tourism alike continue to expand against a backdrop of increasingly volatile transport systems, the corrective intermediary is likely to become a more, not less, prominent feature of the tourism landscape, and a more important object of theory, strategy and policy.

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