

REVIEW

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Platform Ecosystems in Management Scholarship: Reviewing Research on Governance Structures, Strategic Leadership, and Innovation Dynamics

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Abstract

Platform ecosystems represent a distinctive organizational form in the digital economy, characterized by interdependent actors coordinated through digital infrastructure. This systematic integrative review synthesizes peer-reviewed studies to examine three core themes in management scholarship: governance structures, strategic leadership, and innovation dynamics. Drawing on targeted literature from leading journals, the analysis reveals how platform owners balance openness and control to sustain generativity while mitigating power asymmetries. Strategic leadership emerges as a dynamic capability for ecosystem orchestration, enabling platform firms to align complementor incentives and drive value co-creation. Innovation processes are shown to depend on complementor participation, selective promotion of complements, and evolving coordination mechanisms that address tensions between autonomy and collective performance. The review traces the evolution of research from an early emphasis on governance mechanisms to a later focus on leadership, power dynamics, and the ecosystem lifecycle. An original synthesis model—the Platform Ecosystem Governance-Leadership-Innovation Synthesis Model—is introduced to integrate fragmented insights into five interconnected layers. By classifying the literature thematically and highlighting persistent tensions, this review provides a unified architecture for future platform research and offers actionable insights for ecosystem managers.

Keywords Ecosystem orchestration, Complementor coordination, Value co-creation, Platform ecosystems, Governance structures, Strategic leadership, Innovation dynamics

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Introduction

Platform ecosystems have fundamentally transformed competitive landscapes across industries by enabling multi-sided interactions among platform owners, complementors, and users. Unlike traditional supply chains, vertical integrated firms, or strategic alliances, these ecosystems function as meta-organizations [1] in which loosely coupled participants co-create value through shared digital infrastructure while retaining substantial operational autonomy. This organizational form has become pervasive

across sectors ranging from software and e-commerce to transportation, healthcare, and financial services, fundamentally altering how value is created, captured, and distributed in the modern economy.

Management scholarship has increasingly recognized platform ecosystems as a distinct unit of analysis worthy of dedicated theoretical and empirical attention. This recognition accelerated as digital technologies—particularly cloud computing, mobile connectivity, and data analytics—enabled the proliferation of platform-based business

models across industries previously dominated by traditional organizational forms. Research has intensified around three interrelated domains that collectively define the platform ecosystem phenomenon: governance structures that regulate participation and maintain system integrity [2-9], strategic leadership roles performed by platform orchestrators who lack formal authority over participants, and innovation dynamics that emerge from the collective generative capacity of distributed complementors.

Governance in platform ecosystems extends beyond conventional firm hierarchies or market contracts. Platform owners deploy a sophisticated mix of formal rules, algorithmic controls, and relational norms to manage generativity—the capacity of the ecosystem to produce novel and valuable complements—while simultaneously preventing value-destroying behaviors such as free-riding, quality degradation, or opportunistic exploitation of platform resources [3, 10]. Early studies in this domain highlighted the fundamental tension between openness [8], which fosters innovation through unrestricted complementor entry and experimentation, and control mechanisms [3] necessary to maintain quality standards, user trust, and platform coherence. Subsequent work documented how governance architectures evolve dynamically over time to address emerging power asymmetries between platform owners and complementors, particularly in multi-sided markets where one actor's dominance can shape the entire ecosystem trajectory.

Strategic leadership within platform ecosystems differs markedly from traditional firm-centric models of leadership. Platform owners cannot rely on hierarchical authority or direct command-and-control mechanisms [11-17]; instead, they act as orchestrators who must cultivate complementor engagement, alignment, and commitment through indirect means. Leadership capabilities in this context encompass incentive design, selective promotion of high-quality complements, boundary management that encourages participation while preserving ecosystem coherence [1, 4], and the cultivation of shared norms and values among heterogeneous participants. Research emphasizes that effective orchestration involves dynamic capabilities tailored to ecosystem evolution [17], including the ability to reconfigure resources, sense environmental changes, and align heterogeneous actors around shared objectives [18, 19] despite divergent interests.

Innovation dynamics constitute the third pillar of platform scholarship and represent perhaps the most distinctive

feature of platform-based organizing. Value creation in platform ecosystems arises primarily from distributed contributions by complementors that leverage platform core technologies and affordances [20-26]. This distributed innovation model presents unique challenges and opportunities: it enables rapid experimentation and diversification but also introduces coordination costs and quality-control concerns. Studies illustrate how innovation processes are shaped by network centrality [6], product scope decisions [27], and collaborative practices that span traditional firm boundaries. However, innovation is consistently tempered by fundamental tensions: excessive openness risks diluting quality and fragmenting the ecosystem [3], while overly restrictive governance stifles the generativity that gives platforms their competitive advantage [25]. Complementor relationships further complicate these dynamics [22], as participants simultaneously cooperate in value creation and compete for value capture [28-32], generating complex hybrid relational forms.

The period examined in this review witnessed a significant maturation of platform research. Early contributions concentrated on foundational questions of governance design and the conditions under which generativity could be sustained [3, 4, 25]. Mid-period studies shifted toward empirical examinations of orchestration practices and power dynamics [27], often employing qualitative case study methods to capture the nuances of platform evolution [20, 23, 26]. Later work focused on lifecycle dynamics, the emergence and management of power asymmetries [17, 22, 30], and questions of long-term sustainability and resilience [31]. This evolution reflects both theoretical refinement within management scholarship and the growing empirical diversity of platforms across sectors, geographies, and organizational contexts.

Despite this progress, the literature remains fragmented across multiple dimensions. Governance, leadership, and innovation are often studied in isolation, with limited attempts to synthesize their interdependencies or explore how they interact to shape ecosystem outcomes. Persistent tensions—between openness and control [3], autonomy and coordination [20], short-term value capture versus long-term ecosystem health [25]—remain unresolved theoretical puzzles that continue to challenge both scholars and practitioners. Moreover, comparative analyses across platform types (e.g., transaction versus innovation platforms) and evolutionary stages are scarce, limiting the development of contingent theoretical insights.

This integrative review addresses these gaps by systematically compiling and thematically organizing high-impact studies. It traces the chronological developments in the literature, identifies underappreciated cross-theme linkages, and proposes an original architecture—the PEG LIS Model—that organizes extant knowledge into coherent, interconnected layers. In doing so, the review advances management scholarship by providing a unified lens for understanding how governance, leadership, and innovation jointly shape platform ecosystem performance across different contexts and evolutionary stages.

Review Method and Corpus Delimitation

This systematic integrative review followed a structured protocol to ensure transparency, reproducibility, and methodological rigor. The objective was to identify and synthesize peer-reviewed scholarship that directly addresses platform ecosystems with explicit attention to governance structures, strategic leadership, or innovation dynamics as core constructs.

Targeted academic searches were conducted across major databases (Web of Science, Scopus, and Google Scholar) using Boolean combinations of core keywords: “platform ecosystem” combined with (governance OR leadership OR orchestration OR innovation OR complementor OR “value co-creation” OR “power asymmetry”). Searches were restricted to pre-specified journals recognized for their impact in management, strategy, information systems, and innovation studies. These included: *Strategic Management Journal*, *Journal of Business Research*, *MIS Quarterly*, *Information & Management*, *Organization Science*, *Long Range Planning*, *Journal of Strategic Information Systems*, *Technovation*, *Technological Forecasting & Social Change*, *Academy of Management Review*, and *Academy of Management Journal*. Additional targeted searches within these outlets supplemented database results to ensure comprehensive coverage. Only English-language, peer-reviewed journal articles were retained to maintain quality standards and scholarly rigor.

Inclusion criteria required that articles (1) conceptualize or empirically examine platform ecosystems as the primary unit of analysis rather than as a secondary phenomenon, (2) explicitly discuss at least one of the focal themes—governance structures, strategic leadership roles, ecosystem orchestration, innovation processes,

complementor relationships, power dynamics, or ecosystem evolution—as a central theoretical contribution, and (3) appear within the designated time window. Exclusion criteria eliminated studies focused exclusively on technical platform architecture or design without managerial implications, consumer behavior studies that did not address platform governance or strategy, and research examining non-ecosystem digital business models such as traditional e-commerce or simple two-sided markets without generativity or complementor networks.

Screening proceeded in two stages to ensure consistency and reliability. Initial title and abstract review eliminated records that were clearly irrelevant and did not meet the thematic or conceptual criteria. Full-text assessment of the remaining pool applied the inclusion and exclusion criteria with careful attention to theoretical and empirical relevance, yielding the final corpus. Each selected article was coded for thematic focus (primary and secondary themes), methodological approach (conceptual, qualitative, quantitative, or mixed methods), key constructs and theoretical frameworks, and chronological placement within the study period. Vancouver numeric style was applied uniformly for all citations, with full bibliographic details compiled in the reference list.

No statistical meta-analysis was performed, as the diversity of theoretical frameworks, methodological approaches, and empirical contexts across the corpus precluded meaningful quantitative aggregation. Instead, narrative synthesis emphasized conceptual integration, chronological evolution, thematic cross-comparisons, and the identification of persistent tensions and unresolved questions. This delimited corpus provides comprehensive yet focused coverage of management scholarship on platform ecosystems while maintaining methodological rigor and alignment with the review’s integrative objectives.

Literature Synthesis and Thematic Integration

The studies reveal a coherent yet multifaceted body of knowledge organized around six overlapping thematic domains that collectively capture the complexity of platform ecosystems as organizational forms.

Governance structures

Governance structures emerge as foundational to platform ecosystem functioning, with platform owners deploying hybrid mechanisms that combine formal rules, algorithmic controls, and relational norms to balance generativity and control [3, 8, 10, 25]. Research consistently documents what has been termed the “generativity-control tension”: openness to complementor entry stimulates innovation and ecosystem growth, yet unchecked entry risks quality erosion, free-riding, and fragmentation of user experience [3, 25]. Later studies illustrate how governance evolves from static, ex-ante rules toward adaptive, data-driven architectures that respond dynamically to ecosystem scale, complementor behavior, and emerging threats [10, 30]. This evolution reflects a learning process in which platform owners refine their governance approaches based on accumulated experience and changing competitive conditions.

Strategic leadership and orchestration

Strategic leadership and orchestration form the second domain, capturing the distinctive role of platform owners in managing ecosystems without hierarchical authority. Platform owners exercise leadership not through command-and-control but through incentive alignment, selective promotion of complementary capabilities, and boundary-spanning capabilities that connect diverse participants [1, 4, 17, 24]. Leadership is portrayed in the literature as a dynamic capability that enables ecosystem reconfiguration in response to environmental shifts and sustained complementor engagement over time [17, 19]. Empirical evidence shows that effective orchestrators cultivate trust through transparency, reduce participation costs through infrastructure investments, and preserve strategic flexibility by avoiding lock-in to any single complementor or technology trajectory [31].

Complementor coordination and participation

Complementor coordination and participation constitute the third theme, focusing on the actors who generate much of the ecosystem’s value. Studies highlight the dual role of complementors as both collaborators and potential competitors, generating value through co-creation with the platform owner while simultaneously seeking individual rents and strategic autonomy [22, 26, 32]. Coordination mechanisms range from platform-mediated matching and algorithmic curation to community governance practices that foster collective innovation and peer monitoring [6, 16,

28]. Power asymmetries frequently surface in these relationships, as platform owners retain disproportionate control over data access, visibility algorithms, revenue-sharing rules, and the terms of participation [20, 22, 23]. Complementors respond to these asymmetries through various strategies, including multihoming across multiple platforms, investing in platform-specific assets to gain preferential treatment, or organizing collectively to influence platform governance.

Innovation dynamics

Innovation dynamics integrate and build upon the preceding themes, representing the generative outcomes that distinguish platform ecosystems from other organizational forms. Innovation in this context is distributed and cumulative, arising from complementor contributions that leverage platform core technologies, application programming interfaces, and user communities [4, 26, 29]. Key drivers identified in the literature include product scope decisions that define the boundaries of platform participation, the network centrality of complementors, which influences visibility and resource access, and selective promotion strategies that amplify high-value innovations while filtering out low-quality contributions [4, 6, 29]. Research traces how innovation trajectories co-evolve with governance adjustments, particularly during ecosystem scaling when the volume and diversity of complementor contributions increase dramatically [27, 33].

Power asymmetries and value capture

Power asymmetries and value capture are cross-cutting concerns that permeate all other themes. Complementors face dependency risks and limited bargaining power relative to platform owners, prompting strategic responses such as multihoming, platform switching, or investing in relationship-specific assets that increase switching costs [2, 22]. Platform owners, conversely, appropriate value through governance design choices that favor their strategic objectives, including the timing and structure of revenue-sharing arrangements, data access policies, and the introduction of proprietary complements that compete with complementor offerings [20, 23]. These dynamics intensify during ecosystem evolution, as initial cooperative phases characterized by mutual value creation give way to more competitive value-capture contests as the ecosystem matures and the platform owner seeks to monetize its position [23, 30].

Ecosystem evolution and lifecycle

Ecosystem evolution and lifecycle dynamics complete the synthesis by providing a temporal perspective on how platform ecosystems change over time. Early scholarship emphasized the genesis phase, focusing on initial governance design choices and the conditions necessary to achieve critical mass and generativity [3, 4, 25, 27]. Mid-period work examined maturation processes, including the emergence of power asymmetries, the professionalization of complementor communities, and the institutionalization of governance practices [20, 23, 26]. Recent contributions address adaptation, sustainability, and potential decline or transformation, recognizing that platform ecosystems face distinct challenges as they age, including rigidity, declining complementor motivation, and vulnerability to disruptive innovations [17, 30, 31]. Longitudinal patterns across the literature reveal that successful ecosystems exhibit adaptive governance that evolves in response to changing conditions, proactive leadership that anticipates challenges, and sustained innovation flows that mitigate the risks of lock-in and stagnation.

Collectively, the literature demonstrates strong interdependencies across these six domains: governance enables leadership by providing the structural context within which orchestration occurs, leadership coordinates complementors by aligning incentives and managing relationships, and coordinated participation fuels innovation that sustains ecosystem vitality [1, 4, 17, 24]. Persistent tensions—openness versus control, autonomy versus coordination, value creation versus value capture—recur across themes and time periods, suggesting that these are inherent features of platform organizing rather than problems to be definitively solved [3, 20, 25]. The synthesis underscores the need for an integrative architecture capable of capturing these layered relationships and their dynamic interactions over time.

Integrative Review Architecture: The Platform Ecosystem Governance- Leadership-Innovation Synthesis (PEGLIS) Model

To organize the fragmented literature into a unified structure that reflects the interdependencies identified in the synthesis, this review introduces the Platform

Ecosystem Governance-Leadership-Innovation Synthesis (PEGLIS) Model. The PEGLIS Model conceptualizes platform ecosystem scholarship as five interconnected layers that collectively explain how governance, strategic leadership, and innovation dynamics interact to shape ecosystem outcomes across different contexts and evolutionary stages.

The five thematic dimensions are:

1. Governance structures layer: Encompasses mechanisms that regulate participation, enforce quality and behavioral standards, and resolve the generativity-control tension that lies at the heart of platform ecosystem management [3, 8, 10, 25]. This layer includes formal rules, algorithmic controls, contractual arrangements, and relational norms.
2. Strategic leadership layer: Focuses on orchestration capabilities, incentive alignment strategies, and boundary management practices exercised by platform owners to coordinate ecosystem participants without direct authority [1, 17, 24, 31]. This layer captures the dynamic capabilities required for effective ecosystem leadership.
3. Complementor coordination layer: Addresses participation dynamics, relational practices, power asymmetries, and the mechanisms through which complementors interact with the platform owner and with one another [2, 20, 22, 32]. This layer encompasses both formal coordination mechanisms and emergent relational practices.
4. Innovation dynamics layer: Captures distributed value co-creation processes, selective promotion strategies, and cumulative innovation patterns that generate ecosystem value [4, 26, 29, 33]. This layer emphasizes the generative outcomes of platform organizing.
5. Ecosystem evolution layer: Traces lifecycle progression, adaptive responses to environmental and internal changes, and long-term sustainability pathways that determine ecosystem longevity [17, 23, 30]. This layer provides temporal context for understanding how the other layers change over time.

Table 1 develops the PEGLIS model into a layer-by-layer analytical architecture, showing how distinct managerial mechanisms activate recurrent tensions and produce different ecosystem-level effects.

Table 1. Theoretical architecture of the PEG LIS model: layer-specific mechanisms, tensions, and system-level effects

PEGLIS layer	Core managerial question	Dominant mechanism	Primary tensions and activation
Governance Structures	How should participation and conduct be regulated without suppressing generativity?	Rule design, algorithmic curation, access control, and quality enforcement	Openness vs. control
Strategic Leadership	How can the platform owner coordinate autonomous actors without hierarchy?	Orchestration, incentive alignment, selective promotion, and boundary management	Direction vs. autonomy
Complementor Coordination	How are heterogeneous participants aligned while preserving initiative and heterogeneity?	Matching, ranking, community norms, voice mechanisms, and multihoming responses	Collaboration vs. competition
Innovation Dynamics	How is distributed experimentation translated into cumulative ecosystem value?	API/resource leverage, selective amplification, scope design, and learning spillovers	Generativity vs. coherence

Ecosystem Evolution	How do platform ecosystems adapt across genesis, scaling, maturity, and potential decline?	Governance recalibration, capability renewal, participant restructuring, strategic pivoting	Adaptation vs. stability
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These layers are not hierarchical in the sense that one is more fundamental than the others; rather, they are interdependent and mutually constitutive. Changes in one layer ripple across others through feedback loops and recursive interactions. For example, governance adjustments (Layer 1) influence the strategic choices available to leadership (Layer 2), which, in turn, shape complementor behavior and coordination patterns (Layer 3), thereby affecting innovation outputs (Layer 4) and ultimately determining evolutionary trajectories and sustainability outcomes (Layer 5). Conversely, evolutionary pressures (Layer 5) may trigger governance reforms (Layer 1) that enable new forms of leadership (Layer 2) and innovation (Layer 4). The five layers are illustrated in **Figure 1**.

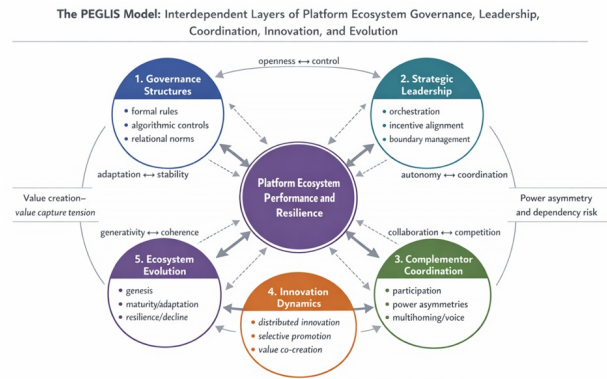


Figure 1. Sustained platform advantages depending on dynamic alignment across the five layers

Cross-Theme Analytical Synthesis: Interlayer Linkages and Enduring Tensions

The PEG LIS Model reveals that governance, leadership, and innovation do not operate in silos but form tightly coupled feedback loops that collectively determine

ecosystem performance. Governance structures (Layer 1) set the boundary conditions within which strategic leadership (Layer 2) can orchestrate complementor coordination (Layer 3) effectively [3, 10, 25]. In turn, effective orchestration amplifies innovation dynamics (Layer 4) by creating conditions conducive to distributed experimentation and value co-creation, whose outcomes feed back into evolutionary trajectories (Layer 5) by determining whether the ecosystem grows, stagnates, or declines [4, 17, 29]. Empirical patterns across studies confirm that successful ecosystems exhibit synchronized movement across layers: platform owners who adjust governance rules responsively to innovation signals and complementor feedback achieve higher complementor retention, sustained generativity, and greater resilience to competitive threats [8, 19, 30].

A central insight emerging from the cross-layer analysis is the recurrent tension between openness and control. Early research framed this as a static trade-off that requires a one-time optimization decision [3, 25, 27]. Yet later contributions demonstrate its fundamentally dynamic nature. As ecosystems mature, governance mechanisms shift from broad openness designed to attract complementors and achieve critical mass toward selective tightening—via algorithmic curation, data-access restrictions, and the introduction of proprietary complements—precisely when innovation velocity and complementor diversity risk fragmentation and quality degradation [20, 23, 30]. Complementors respond to these shifts by multihoming across platforms to reduce dependency, investing in platform-specific assets to gain preferential treatment, or organizing collectively to influence governance changes [2, 22]. These responses create power asymmetries that leadership must continually recalibrate, generating ongoing evolutionary dynamics.

Table 2 introduces a lifecycle-contingent view of platform ecosystems, demonstrating that the appropriate governance, leadership, and innovation logic changes systematically as ecosystems move from emergence to maturity, renewal, or decline.

Table 2. Platform ecosystem lifecycle matrix: how governance, leadership, and innovation priorities shift across evolutionary stages

Evolutionary stage	Governance priority	Leadership priority	Co
Genesis/emergence	Maximize accessible entry while setting minimal legitimacy safeguards	Attract participation, reduce uncertainty, and signal openness	E att co
Early scaling	Formalize rules selectively as volume and heterogeneity increase	Orchestrate growth without discouraging contributors	Ex i d co
Maturity	Manage power asymmetries and sustain complementor motivation	Recalibrate incentives, maintain legitimacy, and avoid over-centralization	pro co
Adaptive renewal	Reopen selected boundaries and renew participation logic	Reconfigure ecosystem roles and revitalize experimentation	R inc co
Decline / defensive retrenchment	Intensify control to protect integrity, often at the cost of openness	Stabilize the core while preserving remaining trust	n a co

Another interlayer dynamic concerns the tension between value creation and value capture. Innovation layers generate collective surplus through distributed contributions from complementors, yet governance and leadership choices determine how that surplus is distributed among participants [20, 26, 32]. Studies consistently show that platform owners who over-emphasize capture—for

example, through restrictive revenue-sharing arrangements, unilateral changes to terms of participation, or the introduction of competing proprietary complements—erode complementor motivation and long-term innovation capacity [22, 23]. Conversely, overly generous openness that fails to capture sufficient value to sustain platform infrastructure and governance investments invites free-riding and threatens ecosystem coherence [3, 25]. The PEG LIS Model makes these trade-offs visible by positioning power asymmetries and value distribution dynamics as cross-cutting forces that connect all five layers.

Chronologically, the literature evolved from isolated examinations of governance mechanisms toward integrative analyses that explicitly link leadership capabilities with innovation outcomes and evolutionary resilience [17, 31, 34]. This progression underscores the maturing recognition within management scholarship that platform success hinges on simultaneous mastery of all five layers rather than excellence in any single domain. It also reflects the growing empirical sophistication of platform research, as scholars have moved from static analyses of governance design toward dynamic, process-oriented accounts of ecosystem evolution.

Advancing Theoretical Understanding: Contributions to Management Scholarship

This integrative review advances platform ecosystem theory in three significant ways. First, it resolves fragmentation in the literature by mapping diverse studies onto the PEG LIS architecture, demonstrating that governance, leadership, and innovation are interdependent rather than parallel or separable streams of inquiry [1, 17, 24]. By revealing the feedback loops and recursive relationships among these domains, the review provides a theoretical foundation for more integrated empirical research.

Second, the model introduces a novel organizing lens that differs from prior meta-organizational or ecosystem frameworks. While previous work has emphasized either structural features (e.g., governance design) or processual dynamics (e.g., orchestration), the PEG LIS Model foregrounds the generativity-control tension as the central engine of ecosystem evolution, showing how this tension

manifests across all five layers and drives adaptive responses over time [3, 25, 30].

Third, the review traces a clear temporal arc in scholarship, identifying how research questions, theoretical frameworks, and methodological approaches have evolved in response to both theoretical developments and empirical changes in platform industries. This historically grounded foundation enables cumulative theory building by clarifying which insights are context-dependent and which reflect more general principles of platform organizing.

By synthesizing work from leading journals across management disciplines—including Strategic Management Journal, Organization Science, MIS Quarterly, and related outlets—the review bridges the strategic management, information systems, and innovation literatures, which have developed in partial isolation. This cross-disciplinary integration is essential because platform ecosystems inherently span these domains: they are simultaneously strategic phenomena (requiring governance and leadership), technological artifacts (enabled by digital infrastructure), and innovation systems (reliant on distributed complementor contributions).

Practical Orchestration Strategies: Actionable Insights for Ecosystem Leaders

Platform managers can operationalize the PEG LIS Model directly to guide decision-making and resource allocation. Governance architects should implement adaptive rule sets that tighten only when innovation quality signals weaken or when value-destroying behaviors become prevalent, rather than relying on static governance designs [10, 30]. This requires investment in monitoring capabilities and data analytics that provide real-time feedback on ecosystem health.

Orchestrators must invest in dynamic capabilities—including selective complement promotion, transparent incentive design, and boundary management—to sustain complementor engagement across lifecycle stages [4, 17, 19]. This involves recognizing that different phases of ecosystem development require different leadership approaches: what works in the genesis phase (e.g., broad openness to attract participants) may be counterproductive

in the maturity phase (where quality control and value capture become more pressing).

Leaders facing power asymmetries should proactively design multihoming safeguards and value-sharing mechanisms that align the interests of complementors and platforms [2, 22]. This may include creating governance structures that give complementors a voice in platform decisions, establishing transparent and predictable revenue-sharing arrangements, and avoiding unilateral changes that undermine trust.

Finally, monitoring interlayer feedback—for example, linking governance adjustments to innovation metrics and complementor satisfaction indicators—enables early detection of stagnation risks and timely evolutionary pivots [23, 31]. Platforms that treat governance, leadership, and innovation as integrated rather than separate functions are better positioned to adapt to changing competitive conditions and sustain long-term performance.

Scope and Methodological Boundaries of the Synthesis

The review is delimited to peer-reviewed articles from pre-specified high-impact journals, ensuring depth within management scholarship while excluding purely technical or consumer-focused studies. Consequently, insights are most applicable to digital multi-sided platforms in mature markets; generalizability to nascent or non-digital ecosystems remains provisional and requires further empirical investigation. The narrative synthesis approach prioritizes conceptual integration over quantitative meta-analysis, preserving theoretical richness and contextual nuance but limiting statistical aggregation and the ability to quantify effect sizes. These boundaries represent deliberate trade-offs between depth and breadth, theoretical sophistication and empirical generalizability.

Emerging Pathways for Platform Ecosystem Inquiry

Future research should test the PEG LIS Model empirically across industries and geographies to establish its boundary conditions and refine its propositions. Studies examining micro-level complementor decision processes under varying governance regimes would illuminate how individual actors respond to governance changes and

leadership interventions [25, 30]. Longitudinal research tracking ecosystem decline or transformation would enrich the evolution layer by revealing how successful platforms avoid stagnation and how failing platforms might be revitalized.

Comparative analyses of winner-takes-all versus symbiotic multi-platform constellations remain scarce and warrant attention [33–35]. Investigating how emerging technologies—such as blockchain-enabled decentralized governance, AI-driven orchestration, and machine learning-based quality control—reshape interlayer dynamics would extend the model to novel empirical contexts. Finally, research exploring the normative dimensions of platform governance—including questions of fairness, equity, and stakeholder welfare—would complement the predominantly managerial focus of existing scholarship.

Concluding Reflections: Toward a Unified Lens for Digital Business

Platform ecosystems constitute a fundamental organizational innovation of the digital age, reshaping industries and challenging traditional assumptions about how value is created and captured. By synthesizing governance structures, strategic leadership, and innovation dynamics through the PEG LIS Model, this review offers a cohesive architecture that clarifies interdependencies, surfaces enduring tensions, and charts evolutionary pathways for both scholarship and practice. The studies collectively demonstrate that sustained ecosystem advantage arises from deliberate, layered alignment across governance, leadership, and innovation rather than isolated excellence in any single domain. As digital platforms continue reshaping industries and expanding into new sectors, the PEG LIS framework provides both scholars and practitioners with a practical and theoretically robust compass for navigating the complex interplay of openness and control, leadership and coordination, and innovation and value capture that defines twenty-first-century competition.

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