

REVIEW

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The Rise of Platform-Based Competition: A Review of Theoretical Perspectives on Digital Marketplaces, Network Effects, and Ecosystem Strategy

Fatima Zahra Amrani^{1*}, Youssef Benali¹

Abstract

Platform-based competition has fundamentally altered the nature of rivalry in digital markets, shifting emphasis from firm-level resources to network effects, multi-sided participation, and ecosystem orchestration. This integrative review synthesizes theoretical perspectives on digital marketplaces, network effects, and ecosystem strategy, drawing on 35 peer-reviewed sources published between 2003 and 2026. It examines how platform market structures differ from traditional competition, the mechanisms through which network effects generate scaling advantages and competitive lock-in, and the strategic role of governance in balancing openness with control. The analysis highlights complementor dynamics, value creation versus capture tensions, and the evolving interplay between platform leaders, users, and complementors. By classifying and comparing core theoretical streams, the review identifies persistent strategic tensions—openness versus control, scale versus governance complexity, and innovation versus appropriation—and traces the maturation of the field from early two-sided market models to contemporary ecosystem perspectives. To advance coherence, the review introduces the platform competition layered synthesis (PCLS) model, a novel integrative architecture that organizes the literature into six interconnected layers. The model reveals feedback mechanisms through which market outcomes continuously reshape platform design and competitive positioning. Implications for digital business strategy and future research directions are discussed.

Keywords Platform-based competition, Digital marketplaces, Network effects, Ecosystem strategy, Multi-sided platforms, Platform governance

*Correspondence:

Fatima Zahra Amrani
fatima.amrani@gmail.com

¹ Department of AI in Materials Science, Mohammed V University, Rabat, Morocco

Introduction

The emergence of digital platforms has redefined competitive dynamics across industries, transforming how firms create and capture value in networked markets [1–3]. Unlike traditional linear supply chains, platforms operate as multi-sided marketplaces that facilitate interactions between distinct user groups, leveraging network effects to drive rapid scaling and market dominance [4–13]. Early theoretical foundations, such as those established in two-sided market economics, demonstrated that pricing and participation strategies on one side directly influence demand on the other, creating unique competitive logics absent in conventional industries [1, 12].

As digital marketplaces expanded, research shifted toward understanding how network effects not only accelerate growth but also shape competitive advantage through direct and indirect mechanisms [2, 8]. Platforms such as those studied in e-commerce and mobile ecosystems illustrate how firms can achieve winner-take-most outcomes by orchestrating

complementors and users simultaneously [6, 14-20]. This evolution has elevated ecosystem strategy as a central concern, where platform leaders must design architectures that encourage participation while retaining control over key value-creating activities [5, 10, 16].

Platform-based competition introduces distinct strategic challenges. Value creation increasingly depends on external complementors, yet value capture requires careful governance to prevent free-riding or ecosystem fragmentation [11, 21-26]. Tensions between openness (to stimulate innovation and scale) and control (to protect strategic positioning) have become recurring themes, as evidenced by empirical and theoretical examinations of platform boundaries and architectural leverage [15, 27]. Moreover, competitive positioning now hinges on dynamic capabilities in ecosystem orchestration rather than internal resource accumulation alone [7, 21].

The literature on platform-based competition has grown rapidly since the early 2000s, moving from economic models of pricing and market entry to interdisciplinary insights drawn from strategic management, information systems, and innovation studies [7-9]. Despite this proliferation, the field remains fragmented across disciplinary silos, with limited integrative efforts that systematically link digital marketplaces, network effects, and ecosystem strategy. Existing reviews often focus narrowly on specific aspects—such as antitrust implications or innovation platforms—leaving a gap in holistic synthesis [7, 18].

This review addresses that gap by providing a comprehensive integrative synthesis of theoretical perspectives on platform-based competition. It focuses on how competition changes in platform market structures, the role of network effects in competitive advantage, strategic positioning in digital marketplaces, and the orchestration of ecosystems. Particular attention is paid to complementor participation, governance mechanisms, and the strategic tensions that arise between openness, control, scale, and value appropriation. By organizing the literature thematically and proposing an original synthesis architecture, the review offers scholars and practitioners a structured lens for understanding the rise of platform-based rivalry and its implications for digital business strategy. The following sections detail the review method, present a thematic synthesis of the literature, and introduce the PCLS model as an integrative framework.

Table 1 compares the principal theoretical perspectives on platform-based competition and clarifies how each explains market structure, scaling, governance, and ecosystem orchestration.

Table 1. Comparative theoretical perspectives on platform-based competition

Theoretical perspective	Core analytical focus	Primary unit of analysis	The main mechanism of advantage	View of competition	Key strategic implication	Representative linkage to manuscript themes
Two-sided market economics	Cross-side interdependence, pricing, and participation balance	Platform and market sides	Subsidization, cross-side demand activation, and critical mass	Competition as market design under interdependent demand	Sequence side-specific incentives to trigger adoption and reduce early-stage friction	Explains market entry barriers and participation asymmetries
Network effects theory	Direct and indirect externalities driving value growth	User base, installed base, participation network	Self-reinforcing growth, lock-in, market tipping	Competition as a race for scale and interaction density	Prioritize retention and interaction quality, not just user volume	Clarifies competitive advantage tipping, lock-in, and multi-sided constraints

Platform architecture perspective	Structural design of access, interfaces, and role boundaries	Platform architecture and modular system	Rule-setting, interface design, and architectural leverage	Competition as rivalry between alternative interaction systems	Design participation architecture to shape ecosystem behavior before scale fully materializes	Connect structural governance and strategic asymmetry
Ecosystem strategy perspective	Orchestration of complementors and co-created value	Ecosystem of platform leader, complementors, and users	Coordination, complementarities, ecosystem alignment	Competition as ecosystem-versus-ecosystem rivalry	Treat complementors as strategic partners and manage ecosystem health actively	Explore complementor dynamic ecosystem participation
Governance perspective	Balancing openness, control, and appropriation	Governance mechanisms, rules, and boundary conditions	Selective openness, quality control, and appropriation safeguards	Competition as governance optimization under innovation and leakage risks	Adjust control mechanisms dynamically across lifecycle stages	Illuminate openness control to and value capture challenges
Dynamic capability/platform evolution perspective	Reconfiguration over time under changing feedback	Platform trajectory and adaptive decisions	Architectural flexibility, iterative redesign, and strategic renewal	Competition as path-dependent adaptation under evolving feedback loops	Continuously reconfigure rules, incentives, and ecosystem roles as markets mature	Explore adaptive lifecycle change strategic repositioning

Review Method and Corpus Delimitation

This integrative review follows a systematic yet interpretive approach to identify, evaluate, and synthesize theoretical perspectives on platform-based competition. The search strategy targeted peer-reviewed publications addressing the core themes specified in the review scope: platform-based competition in digital markets, digital marketplaces and multi-sided platforms, network effects and competitive advantage, ecosystem strategy in platform environments, platform governance and market coordination, value creation and capture in digital platforms, complementor dynamics and ecosystem participation, platform leadership and orchestration, and strategic tensions between openness, control, and scale.

Searches were conducted across major academic databases, including Web of Science, Scopus, and Google Scholar, using combinations of keywords such as “platform competition,” “digital marketplaces,” “network effects,” “ecosystem strategy,” “multi-sided platforms,” “platform governance,” and “complementor dynamics.” Results were restricted to publications appearing in high-impact journals aligned with digital business and management studies, including the Strategic Management Journal, Journal of Business Research, MIS Quarterly, Information and Management, Organization Science, Long Range Planning, Journal of Strategic Information Systems, Technovation, Technological

Forecasting and Social Change, Academy of Management Review, and Academy of Management Journal. The temporal scope covered 2003 to 2026 to capture the field’s foundational contributions through its most recent developments. Preprints were included only if subsequently published in peer-reviewed outlets.

Inclusion criteria required articles to be peer-reviewed, to engage directly with at least two of the core themes, and to offer theoretical or conceptual insights rather than purely empirical or descriptive accounts. Exclusion criteria eliminated studies focused exclusively on non-digital contexts, single-sided markets, or purely technical implementation issues without strategic implications. Screening proceeded in stages: initial title and abstract review, followed by full-text assessment of relevance and theoretical contribution.

Figure 1 reports the PRISMA-guided review flow used to identify, screen, assess, and retain the 35 publications included in the final corpus.

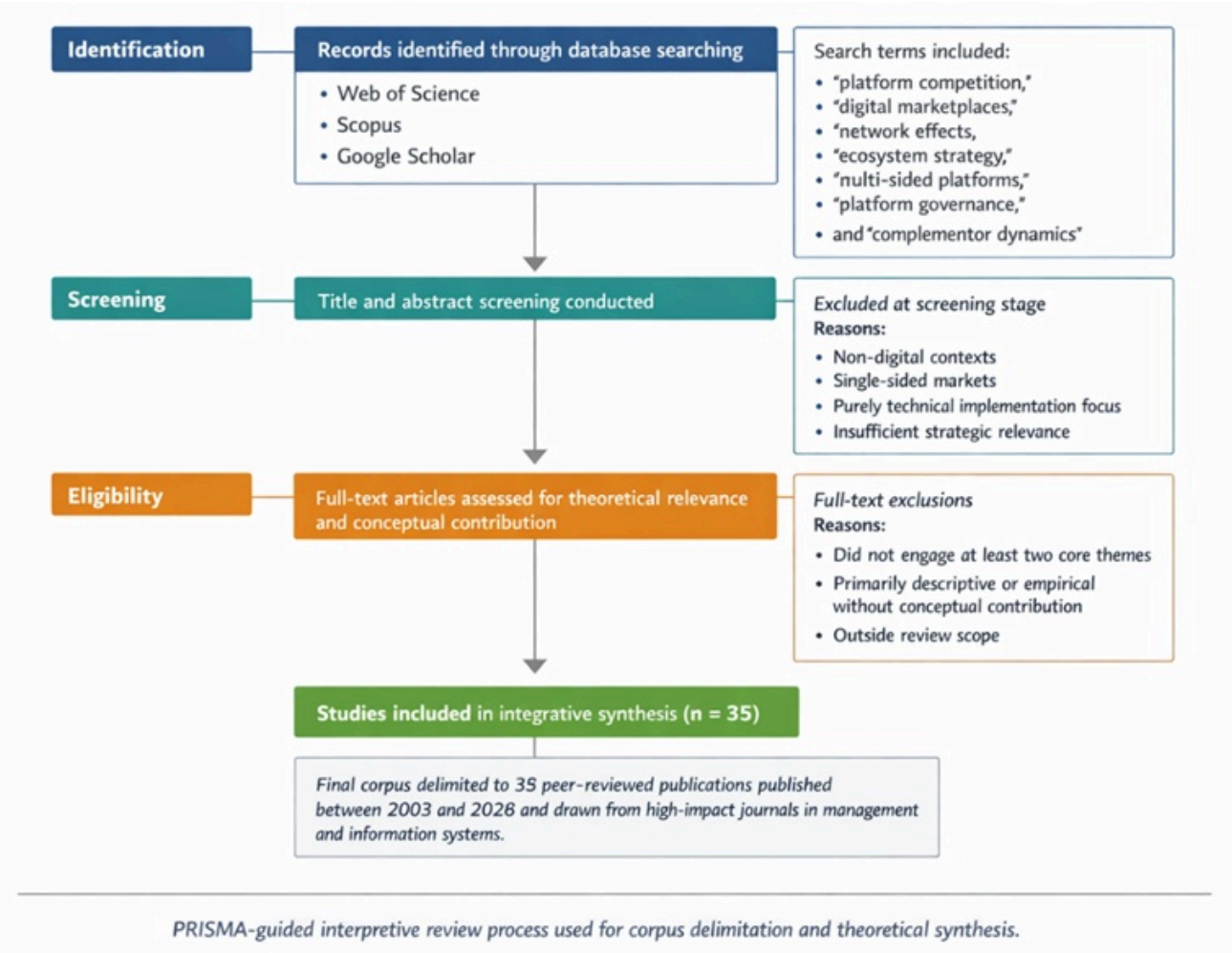


Figure 1. The PRISMA-guided review flow was used to identify, screen, assess, and retain the 35 publications included in the final corpus.

From a broader pool of relevant works, the final corpus was deliberately delimited to exactly 35 publications that collectively represent the most influential and directly aligned theoretical perspectives. These references form the complete evidentiary base for all subsequent synthesis and are cited throughout using the Vancouver numeric style. No

additional sources outside this approved corpus were incorporated. This focused corpus enables deep integrative analysis while maintaining methodological transparency and thematic coherence.

Literature Synthesis and Thematic Integration

Digital marketplaces and competitive structure

Platform-based competition diverges fundamentally from traditional firm rivalry because value creation is not embedded in a standalone product but emerges from interactions among interdependent user groups [1, 4, 9]. This shift from product-centric to interaction-centric logic requires firms to reconceptualize competitive advantage as a function of participation, coordination, and ecosystem density rather than production efficiency alone. Early economic models formalized this distinction by introducing cross-side network externalities, demonstrating that platforms must strategically subsidize one side of the market to catalyze participation on the other and achieve critical mass [1, 13].

Building on this foundation, subsequent strategy research reframed competitive structure as an outcome of platform architecture. Architectural decisions—such as which sides to include, how access is granted, and how interactions are governed—define the boundaries of the market itself and shape competitive asymmetries among platforms [4, 19]. In this view, competition is not merely between firms but between alternative configurations of interaction systems. Empirical studies further extend this perspective by showing that late entrants are not necessarily disadvantaged if they can reconfigure participation incentives, leverage indirect network effects, or strategically recruit high-value complementors to reshape user expectations and engagement patterns [6, 20]. This body of work collectively highlights that competitive structure in digital marketplaces is endogenous, continuously shaped by platform design choices and strategic interventions.

Network effects and scaling advantage

Network effects represent the central mechanism through which platforms generate and sustain competitive advantage, functioning as self-reinforcing feedback loops that link user growth to value creation [2, 8, 25]. The literature distinguishes between same-side (direct) network effects—where value increases with the number of similar users—and cross-side (indirect) effects, where participation on one side enhances value for another [2, 13]. It is the interaction between these two forms that enables rapid scaling, often leading to winner-takes-most dynamics or market tipping under certain conditions.

However, more recent research complicates this deterministic view by introducing boundary conditions that weaken or moderate network effects. Multihoming behavior, where users or complementors participate in multiple platforms simultaneously, reduces exclusivity and dampens the strength of network-driven lock-in [9, 25]. In response, platforms deploy strategies such as exclusivity agreements, differentiated service quality, or enhanced user experience to reinforce user commitment and rebuild switching costs. Longitudinal studies further reveal that network effects are not static; their role evolves over the platform lifecycle. In early stages, growth is driven primarily by user acquisition and the activation of cross-side effects. In contrast, in later stages, competitive advantage depends more on retention, engagement intensity, and the depth of ecosystem interactions [8, 31]. This temporal dimension underscores that scaling advantage is not solely about size, but about sustaining the quality and structure of network interactions over time.

Ecosystem strategy and complementor dynamics

The ecosystem perspective extends the analysis of platform competition by emphasizing the role of external actors—developers, suppliers, and service providers—in co-creating value [5, 10, 21]. Platforms operate as orchestrators of these ecosystems, designing participation architectures that align complementor incentives with overall system performance while maintaining control over critical resources [15, 26]. This orchestration function introduces a new dimension of

strategy, where competitive advantage depends on the ability to attract, coordinate, and retain a diverse set of contributors.

Research on complementor dynamics highlights that success within a platform is not determined solely by the intrinsic quality of offerings but also by relative positioning within the ecosystem's structure [26, 28–30]. Factors such as visibility, access to users, and integration with core platform functionalities influence performance outcomes, often creating hierarchical or modular patterns of advantage. Comparative studies further demonstrate that ecosystem strategies vary significantly across contexts. Industrial platforms, for instance, tend to prioritize stability, standardization, and long-term coordination mechanisms, whereas consumer-oriented platforms emphasize scalability, openness, and rapid innovation cycles [30–33]. These differences suggest that ecosystem strategy is contingent on industry characteristics, technological complexity, and the nature of value co-creation.

Governance, control, and participation tensions

Governance emerges as a central tension in platform strategy, reflecting the need to balance openness and control in managing ecosystem participation [11, 16, 27]. Open governance structures can accelerate innovation and attract a broader base of complementors, enhancing ecosystem diversity and growth. However, increased openness may also reduce the platform's ability to capture value and maintain strategic differentiation [11, 27]. Conversely, tighter control can protect core assets and ensure quality. Still, it may discourage participation and limit the scope of innovation, thereby creating opportunities for competing platforms to attract disaffected users or complementors [16, 18].

Importantly, governance is not a binary choice but a dynamic continuum that evolves in response to competitive pressures and technological change. Research on platform boundaries and architectural leverage shows that firms continuously adjust their governance mechanisms—such as access rules, pricing structures, and data policies—to optimize the trade-off between innovation and control [10, 27]. These challenges are further intensified in multi-platform environments, where overlapping ecosystems create complex interdependencies and strategic interactions across platforms [15, 24]. In such contexts, governance decisions must account not only for internal ecosystem dynamics but also for external competitive positioning.

Platform evolution and competitive positioning

Platform competition is inherently dynamic, with evolutionary trajectories shaped by the interaction between initial design choices and ongoing market feedback [7, 29, 34, 35]. Early-stage competition is typically characterized by aggressive user acquisition strategies and efforts to activate network effects, often involving significant subsidization and experimentation [7, 20]. As platforms mature, the focus shifts toward ecosystem consolidation, value appropriation, and the management of increasingly complex stakeholder relationships.

Strategic positioning in later stages depends on the platform's ability to reconfigure its ecosystem, adapt governance structures, and respond to emerging competitive threats [29, 34]. This may involve expanding into adjacent markets, integrating vertically, or redefining the roles of complementors within the ecosystem. Recent research emphasizes the importance of architectural flexibility, arguing that platforms capable of adapting their core structures are better positioned to navigate uncertainty and sustain long-term advantage [28, 35]. Anticipating the evolution of network effects and ecosystem dynamics becomes a critical capability, enabling platform leaders to shape market trajectories rather than merely react to them proactively.

Taken together, these thematic domains reflect a clear progression in the literature—from static, equilibrium-based economic models toward dynamic, strategy-oriented frameworks that capture the complexity of ecosystem-level competition. This integrated perspective highlights that platform success is not determined by a single factor but by the alignment of architecture, network effects, governance, and ecosystem strategy over time.

Integrative architecture for platform competition research: The PCLS model

To synthesize the fragmented literature into a coherent architecture, this review introduces the PCLS model. The PCLS Model organizes existing theoretical perspectives into six interconnected layers that capture the multi-faceted nature of platform-based competition: (1) marketplace structure layer, (2) network effects layer, (3) governance and orchestration layer, (4) ecosystem participation layer, (5) competitive positioning and value capture layer, and (6) adaptation and platform evolution layer.

The marketplace structure layer addresses the foundational logic of multi-sided interactions and competitive entry barriers [1, 4, 9]. The network effects layer examines scaling dynamics and the conditions under which effects generate sustainable advantage or market tipping [2, 8, 13, 25]. The governance and orchestration layer focuses on mechanisms for balancing openness and control [11, 16, 27]. The ecosystem participation layer analyzes complementor dynamics and coordination incentives [5, 10, 26, 30]. The competitive positioning and value capture layer integrates insights on value creation, appropriation, and strategic interdependence [20, 21, 33]. Finally, the adaptation and platform evolution layer captures feedback processes through which market outcomes reshape platform architectures over time [7, 29, 35].

The PCLS Model posits that these layers are not sequential but mutually reinforcing, with bidirectional influences and feedback loops. Platform design choices in the governance layer, for example, directly affect participation in the ecosystem layer, which in turn amplifies network effects and ultimately determines value capture and evolutionary trajectories. Competitive outcomes feed back into earlier layers, prompting architectural reconfiguration. This layered structure enables systematic comparison of theoretical perspectives while highlighting strategic tensions across domains.

Table 2 consolidates the central strategic tensions in platform-based competition and shows how they manifest across the layers of the PCLS model.

Table 2. Strategic tensions in platform competition are mapped across the PCLS layers

Strategic tension	PCLS layers are primarily involved	What creates the tension	Strategic risk is overemphasized on one side	Strategic opportunity if balanced effectively	Indicative research implication
Openness vs. control	Governance and orchestration; Ecosystem participation; Competitive positioning	Platforms need broad participation for innovation, but control for quality and appropriation	Excess openness causes value leakage and fragmentation; excess control deters participation and innovation	Selective openness sustains innovation while protecting core strategic assets	Future work can examine contingent governance designs across platform types
Scale vs. governance complexity	Network effects; Governance and orchestration; Adaptation and evolution	Growth increases coordination burdens, policy complexity, and ecosystem heterogeneity	Unmanaged scale erodes quality, raises conflict, and weakens strategic coherence	Governance redesign can convert growth into a durable advantage rather than disorder	Longitudinal work should test when scaling shifts from asset to liability
Innovation vs. appropriation	Ecosystem participation; Competitive positioning;	Complementors create new value, but platform leaders seek to capture returns	Over-appropriation discourages complementors; under-appropriation	Balanced value-sharing strengthens complementor	Research should explore appropriation regimes across consumer and

	Governance and orchestration		weakens platform sustainability	commitment and long-run innovation	industrial ecosystems
Multihoming vs. lock-in	Network effects; Competitive positioning	Users and complementors may participate across multiple platforms, weakening exclusivity	Weak lock-in reduces defensibility; excessive lock-in may trigger dissatisfaction or regulatory scrutiny	Differentiated quality and ecosystem depth can sustain an advantage without coercive dependence	Comparative studies can examine non-price mechanisms of platform stickiness
Stability vs. adaptability	Marketplace structure; Adaptation and evolution	Platforms require reliable rules, yet must respond to competitive and technological shocks	Excess stability leads to rigidity; excess adaptation creates uncertainty and coordination fatigue	Adaptive stability enables credible governance with room for strategic reconfiguration	Research can test how platforms sequence structural change across lifecycle stages
Value creation vs. value capture	Ecosystem participation; Competitive positioning; Governance and orchestration	Shared ecosystem value does not automatically translate into platform rents	Over-focus on creation delays monetization; over-focus on capture weakens ecosystem vitality	Well-timed monetization preserves participation while strengthening platform position	Future theory should better integrate ecosystem health with platform profit logic

Figure 2 presents the PCLS model as a directional six-layer architecture linking marketplace structure, network effects, governance, ecosystem participation, competitive positioning, and platform evolution.

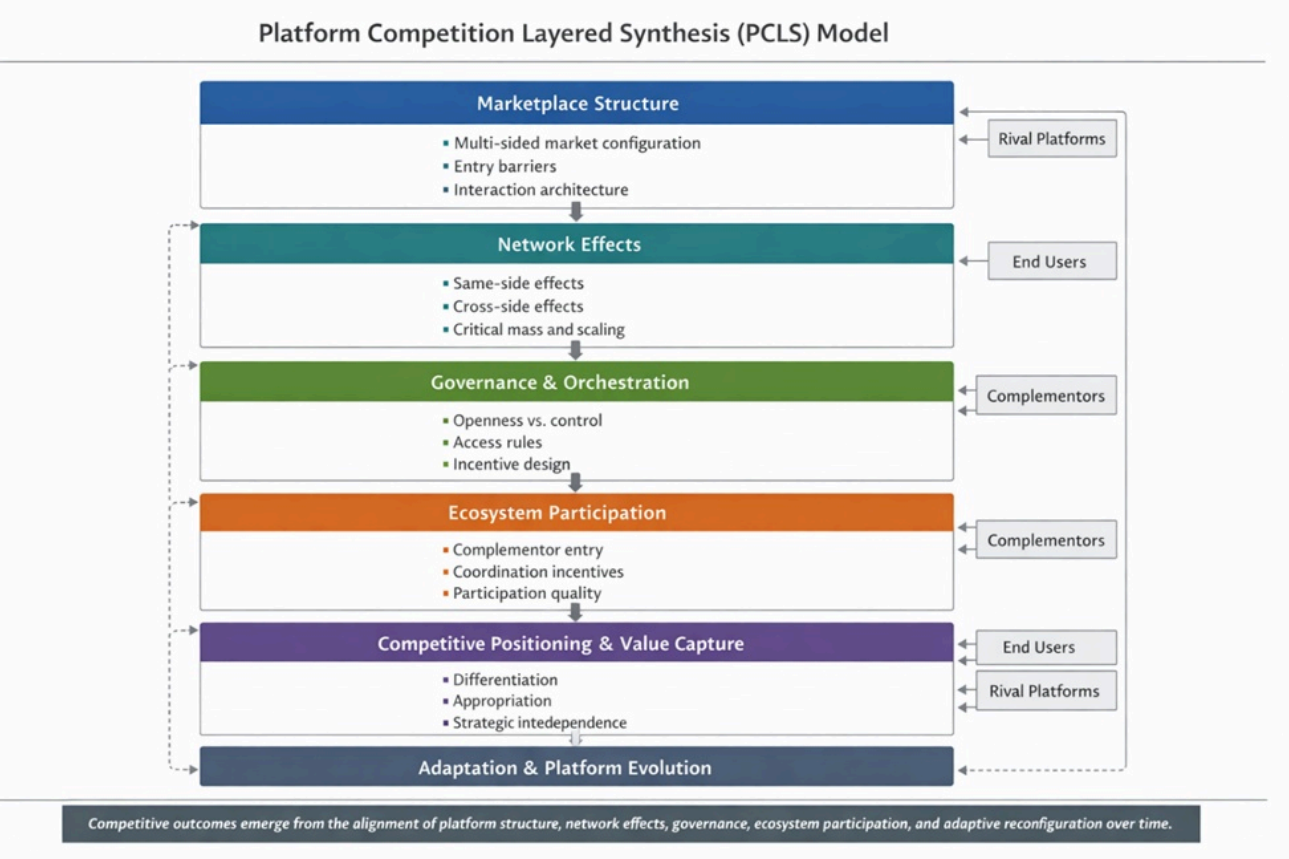


Figure 2. The PCLS model. A concentric circular diagram with the platform leader positioned at the center, surrounded by six concentric layers corresponding to the PCLS dimensions (marketplace structure at the innermost layer, progressing outward to adaptation and platform evolution at the outermost). Three user groups—end users, complementors, and rival platforms—are depicted as interconnected nodes on the periphery with bidirectional arrows indicating multi-sided interactions. Solid arrows flow clockwise from “platform design and governance” through “participation and scaling (Network Effects)” to “value creation/capture” and finally to “competitive outcomes.” Dashed feedback loops return from outcomes to each preceding layer, illustrating dynamic reconfiguration. Small icons within each layer represent key constructs (e.g., cross-side externalities in the network effects layer, incentive alignment in the governance layer). The overall visual emphasizes cyclical reinforcement and strategic interdependence among digital marketplaces, network effects, and ecosystem strategy.

The PCLS model provides an integrative scaffold that advances beyond isolated thematic reviews by revealing systemic relationships across the literature [7, 15, 16]. Future applications of the model can guide both theoretical refinement and managerial decision-making in platform environments.

Analytical Synthesis and Forward Pathways in Platform Competition Research

Enriching theoretical lenses on digital market dynamics

The PCLS model advances theoretical understanding by integrating previously siloed perspectives into a unified multi-layered architecture [7, 8, 16]. Early economic contributions established the foundational mechanics of two-sided markets and cross-side externalities [1, 13], yet these models offered limited insight into strategic evolution over time. Strategy-

oriented research subsequently introduced ecosystem orchestration and architectural leverage, emphasizing how platform leaders shape participation beyond pricing alone [5, 10, 21]. The PCLS Model bridges these streams by demonstrating that marketplace structure (layer 1) and network effects (layer 2) are dynamically conditioned by governance choices (layer 3) and ecosystem participation (layer 4), which together determine competitive positioning (layer 5) and long-term adaptation (layer 6) [27, 30, 35].

This layered synthesis reveals that theoretical fragmentation in the literature stems from differential emphasis: economic models prioritize static equilibrium and market tipping [1, 12, 25], while innovation and information systems perspectives highlight path-dependent evolution and feedback loops [15, 29, 33]. By making these interdependencies explicit, the PCLS Model contributes a meta-theoretical scaffold that explains why identical network-effect mechanisms can produce divergent competitive outcomes depending on governance and complementor alignment [9, 11, 26]. It also clarifies persistent tensions—such as openness versus control—as inherent to all six layers rather than isolated design decisions [16, 27, 34]. Overall, the model refines platform theory from a collection of partial explanations into a coherent, systemic view of rivalry in digital environments.

Strategic orientations for platform orchestrators

Platform leaders can derive actionable guidance from the synthesized literature on several fronts. First, early-stage marketplace design must explicitly account for cross-side dependencies when selecting which user groups to subsidize or prioritize [1, 4, 13]. Second, scaling advantage accrues not merely from growing user numbers but from deliberate orchestration of complementor incentives and relative standing within the ecosystem [20, 26, 30]. Managers should therefore invest in modular architectures that lower entry barriers for complementors while retaining control over critical value-capture points [11, 27].

Third, governance mechanisms must evolve iteratively: excessive openness risks value leakage, whereas rigid control can suppress innovation and invite multihoming by rivals [16, 18, 25]. The PCLS Model underscores the need for continuous monitoring of feedback loops, whereby competitive outcomes trigger architectural reconfiguration [7, 29, 35]. In practice, this translates to regular stress-testing of platform boundaries and proactive adjustment of participation rules as network effects mature [8, 31]. Finally, ecosystem strategy should treat complementors as strategic partners rather than interchangeable suppliers, aligning their performance metrics with overall platform health to sustain long-term competitive positioning [5, 10, 21, 33]. These orientations equip executives to navigate the distinctive competitive logic of digital marketplaces more effectively.

Scope and boundaries of the integrative framework

Several delimitations shape the present synthesis. The corpus was intentionally restricted to 35 peer-reviewed theoretical and conceptual contributions published between 2003 and 2026, drawn exclusively from high-impact management and information systems journals [7]. While this focus ensures depth and thematic coherence, it excludes purely empirical large-scale datasets, practitioner-oriented reports, and non-English language scholarship. Consequently, the review privileges conceptual development over statistical generalization or contextual variation across geographies and industries.

The PCLS Model itself is an integrative device rather than an empirically validated causal framework; its layered architecture organizes existing perspectives but does not test new hypotheses. Temporal coverage, although broad, cannot capture very recent (post-2026) developments, and the emphasis on platform leaders' perspectives may under-represent the agency of complementors or end-users [15, 26]. These boundaries, while necessary for focused synthesis, imply that the conclusions are best viewed as a theoretically grounded starting point rather than an exhaustive account of platform-based competition.

Horizons for advancing ecosystem scholarship

Future platform competition research can build directly on the PCLS Model by extending each layer into under-explored domains. Scholars should investigate how artificial intelligence and generative technologies reshape network effects and governance mechanisms, particularly in industrial ecosystems where data asymmetries intensify [30, 31]. Inter-platform competition and multi-platform participation, already signaled in recent work [24], warrant deeper analysis of coopetition dynamics and ecosystem switching costs.

Additional avenues include the role of regulatory interventions in altering value-capture possibilities across layers [12, 18] and the sustainability implications of platform scaling, especially regarding complementor diversity and digital inclusion. Longitudinal studies could test the feedback loops posited in the adaptation layer, while comparative research across consumer, enterprise, and public-sector platforms would enrich understanding of contextual contingencies [29, 33, 35]. Finally, integrating micro-level behavioral insights on complementor decision-making with macro-level market dynamics would bridge the current gap between individual participation and systemic outcomes [21, 26]. These directions promise to keep platform scholarship responsive to the rapidly evolving digital economy.

Conclusion

Platform-based competition has matured from an economic curiosity into a dominant strategic paradigm that redefines value creation, market coordination, and competitive advantage in the digital age. This integrative review demonstrates that success now hinges on mastering the interplay of multi-sided marketplaces, self-reinforcing network effects, and carefully orchestrated ecosystems. The PCLS Model offers a practical and scholarly tool for navigating these complexities, illuminating how governance choices, participation dynamics, and evolutionary feedback loops collectively determine platform trajectories.

As digital marketplaces continue to permeate industries, the strategic tensions between openness and control, scale and coherence, and innovation and appropriation will only intensify. By synthesizing theoretical perspectives into a coherent layered architecture, this review equips researchers and practitioners with a clearer map of the platform landscape and its future contours. Ultimately, the rise of platform-based competition underscores a broader shift: competitive advantage increasingly resides not within firm boundaries but in the intelligent design and dynamic management of networked ecosystems.

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References

- Baldwin R, Wyplosz C. The economics of European integration. 7th ed. New York: McGraw-Hill; 2022.
- Hinz O, Otter T, Skiera B. Estimating network effects in two-sided markets. *J Manag Inf Syst.* 2020;37(1):12-38.
- Huang P, Lyu G, Xu Y. Quality regulation on two-sided platforms: Exclusion, subsidization, and first-party applications. *Manag Sci.* 2022;68(6):4415-34.
- Belderbos R, Carree M, Diederer B, Lokshin B, Veugelers R. Heterogeneity in R&D cooperation strategies. *Int J Ind Organ.* 2004;22(8-9):1237-63.
- Kenney M, Rouvinen P, Seppälä T, Zysman J. Platforms and industrial change. *Ind Innov.* 2019;26(8):871-9.
- Cennamo C. Competing in digital markets: A platform-based perspective. *Acad Manag Perspect.* 2021;35(2):265-91.
- Rietveld J, Schilling MA. Platform competition: A systematic and interdisciplinary review of the literature. *J Manag.* 2021;47(6):1528-63.
- McIntyre DP, Srinivasan A. Networks, platforms, and strategy: Emerging views and next steps. *Strateg Manag J.* 2017;38(1):141-60.
- Karhu K, Gustafsson R, Eaton B, Henfridsson O, Sørensen C. Four tactics for implementing a balanced digital platform strategy. *MIS Q Exec.* 2020;19(2):105-20.
- Pernier J, Schauer K. Does the actin network architecture leverage myosin-I functions? *Biology.* 2022;11(7):989.
- Wang J, Guo B, Wang X, Lou S. Closed or open platform? The nature of platform and a qualitative comparative analysis of the performance effect of platform openness. *Electron Commer Res Appl.* 2020;44:101007.
- Katz M, Sallet J. Multisided platforms and antitrust enforcement. *Yale LJ.* 2017;127:2142.
- Sayed A, Charteris A. Is the rand a commodity currency? A volatility spillover analysis. *Invest Anal J.* 2022;51(3):186-201.
- Cusumano MA, Gawer A, Yoffie DB. The business of platforms: Strategy in the age of digital competition, innovation, and power. New York: HarperBusiness; 2019.
- Hein A, Schreieck M, Riasanow T, Setzke DS, Wiesche M, Böhm M, et al. Digital platform ecosystems. *Electron Mark.* 2020;30(1):87-98.

Chursin AA, Dubina IN, Carayannis EG, Tyulin AE, Yudin AV. Technological platforms as a tool for creating radical innovations. *J Knowl Econ.* 2022;13(1):264-75.

Peruchi DF, de Jesus Pacheco DA, Todeschini BV, ten Caten CS. Moving towards digital platforms revolution? Antecedents, determinants and conceptual framework for offline B2B networks. *J Bus Res.* 2022;142:344-63.

Jullien B, Sand-Zantman W. The economics of platforms: A theory guide for competition policy. *J Compet Law Econ.* 2020;16(4):573-605.
<https://doi.org/10.1093/joclec/nhaa012>.

Poniatowski M, Lüttenberg H, Beverungen D, Kundisch D. Three layers of abstraction: A conceptual framework for theorizing digital multi-sided platforms. *Inf Syst E-Bus Manage.* 2022;20(2):257-83.

Zhu F, Liu Q. Competing with complementors: An empirical look at Amazon.com. *Strateg Manag J.* 2018;39(10):2618-42.

Altman EJ, Tushman ML. Platforms, open/user innovation, and ecosystems: A strategic leadership perspective. *Adv Strateg Manag.* 2017;37:177-207.
<https://doi.org/10.1108/S0742-332220170000037007>.

Kumar V. Platform ecosystems: Aligning architecture, governance, and strategy. *J Mark.* 2014;78(2):143-5.

Abdelkafi N, Raasch C, Roth A, Srinivasan R. Multi-sided platforms. *Electron Mark.* 2019;29(4):553-9.

Heimburg V, Wiesche M. Relations between actors in digital platform ecosystems: A literature review. In: 30th European Conference on Information Systems; 2022 Apr.

Bakos Y, Halaburda H. Platform competition with multihoming on both sides: Subsidize or not? *Manag Sci.* 2020;66(12):5599-607.

Wen W, Zhu F. Threat of platform-owner entry and complementor responses: Evidence from the mobile app market. *Strateg Manag J.* 2019;40(9):1336-67.

Gawer A. Digital platforms' boundaries: The interplay of firm scope, platform sides, and digital interfaces. *Long Range Plann.* 2021;54(5):102045.

Papachristos G. Platform competition: A research outline for modelling and simulation research. *J Eng Technol Manag.* 2020;56:101567.

Zhao Y, Von Delft S, Morgan-Thomas A, Buck T. The evolution of platform business models: Exploring competitive battles in the world of platforms. *Long Range Plann.* 2020;53(4):101892.

Jovanovic M, Sjödin D, Parida V. Co-evolution of platform architecture, platform services, and platform governance: Expanding the platform value of industrial digital platforms. *Technovation.* 2022;118:102218.

Vakeel KA, Malthouse EC, Yang A. Impact of network effects on service provider performance in digital business platforms. *J Serv Manag.* 2021;32(4):461-82.

Hein A, Schrieck M, Wiesche M, Krcmar H. Digital platform ecosystems: A literature review on network effects and complementor dynamics. *J Inf Technol.* 2020.

Aulkemeier F, Iacob ME, van Hillegersberg J. Platform-based collaboration in digital ecosystems. *Electron Mark.* 2019;29(4):597-608.

Aluchna M. Coopetition and corporate governance within business groups. In: Aluchna M, Idowu SO, editors. *Business groups and strategic coopetition*. London: Routledge; 2022. p. 94-108.

Burgers C, Brugman BC, Boeynaems A. Systematic literature reviews: Four applications for interdisciplinary research. *J Pragmat.* 2019;145:102-9.