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The language of platform governance: An economics-based scoping review of SME value creation and dependency in digital platform ecosystems

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ABSTRACT

Digital platforms have become a dominant form of economic organization, yet small and medium-sized enterprises (SMEs) often participate in platform ecosystems without clear guidance on how platform governance changes value creation and value capture. This study develops an original economics-based scoping review of peer-reviewed, DOI-bearing literature to explain how platform participation affects SME performance, innovation, and dependency. Drawing on transaction cost economics, institutional economics, resource-based theory, dynamic capabilities, multi-sided market theory, and ecosystem strategy, the article asks: What economic mechanisms explain SME value creation on platforms, what governance tensions affect value capture, and what research agenda follows for business management scholarship? A theory-led scoping method was used to synthesize 40 DOI-verified sources, including foundational economics articles and contemporary digital platform studies. The synthesis identifies five connected mechanisms: transaction-cost economizing, network-effect scaling, boundary-resource governance, ecosystem complementarities, and SME platform capability. It also shows that platforms do not simply reduce market frictions; they relocate coordination, bargaining, and innovation risks from traditional firm boundaries into platform rules, interfaces, data architectures, and complementor relationships. The article contributes a three-layer framework - economizing, orchestrating, and capability-building - and proposes testable propositions for future empirical research. The findings suggest that SMEs benefit most when digital platform capability and network capability are combined with institutional safeguards against platform-owner opportunism, opaque algorithmic governance, and complementor displacement. The study concludes that platform participation is best understood not as a purely technological adoption decision but as a governance choice shaped by transaction costs, capabilities, and ecosystem power.

Keywords: Digital platforms; SMEs; platform ecosystems; digital transformation; scoping review

1. INTRODUCTION

Digital platforms have become one of the most visible organizational forms in the contemporary economy. In retailing, mobility, financial services, education, creative industries, logistics, and software, platforms coordinate transactions among multiple groups while setting rules over access, pricing, data, reputation, search, and dispute resolution. For small and medium-sized enterprises (SMEs), this shift is strategically important because platforms can reduce entry barriers, widen market reach, and accelerate innovation, but they can also create new dependencies on platform owners, algorithms, interfaces, and ecosystem partners. This duality makes platform participation a central business management issue rather than a narrow technology-adoption issue.

The theoretical roots of this problem are deeply economic. Coase (1937) asked why firms exist when markets can coordinate exchange. Williamson (1979, 1981) extended this logic by arguing that governance structures differ in their ability to economize on transaction costs, particularly when asset specificity, uncertainty, and opportunism are present. North (1991) added that institutions shape the cost and credibility of exchange. These foundational economic insights remain relevant because digital platforms do not abolish transaction costs; they reorganize them. Search costs may fall, but rule-compliance costs, switching costs, data-dependence costs, and bargaining costs may rise. The platform economy therefore requires a renewed theory of firm boundaries and market coordination.

The platform literature has expanded across economics, strategy, innovation, entrepreneurship, and information systems. Multi-sided market theory explains how platforms create value by connecting groups whose choices are interdependent (Parker & Van Alstyne, 2005; Rochet & Tirole, 2003). Strategy and innovation research explains how platform owners stimulate complementary innovation while controlling the architecture and rules of participation (Boudreau, 2010; Gawer & Cusumano, 2014; Tiwana et al., 2010). Ecosystem research explains how value creation depends on complementarities and alignment among actors that are legally independent but strategically interdependent (Adner, 2017; Jacobides et al., 2018). Entrepreneurship research explains how digital technologies change opportunity formation, venture scaling, and business model innovation (Nambisan, 2017; Nambisan et al., 2019). Yet these streams often speak in different vocabularies, and SME-oriented work remains comparatively fragmented.

For SMEs, this fragmentation matters. Many SMEs use marketplace platforms, cloud platforms, social-media platforms, app stores, and financial-technology platforms as part of digital transformation. However, SMEs normally possess fewer financial, managerial, legal, and technological resources than large firms. They may therefore gain disproportionately from platform-mediated access to customers and knowledge, but they may also suffer disproportionately from rule changes, commission increases, search-ranking opacity, data lock-in, and platform-owner entry into complementor markets. Cenamor et al. (2019) show that entrepreneurial SMEs need digital platform capability, network capability, and ambidexterity to compete effectively through platforms. Jiang et al. (2023) similarly link digital platform capability to SME innovation performance. These findings suggest that economic mechanisms and managerial capabilities must be studied together.

This article responds by developing an economics-based scoping review of the platform literature relevant to SME value creation and value capture. The study is literature-based rather than primary empirical research, but it is original in its synthesis. It integrates classical economic reasoning with contemporary digital platform scholarship and translates the resulting synthesis into a management framework and future research propositions. The article is structured using the IMRAD format. The introduction states the problem and research questions. The methods section explains the scoping approach and selection logic. The results section reports the thematic synthesis. The

discussion section develops an integrative framework and implications for theory, practice, and policy. The conclusion summarizes contributions and limitations.

A business management perspective is especially useful because the platform problem sits at the intersection of strategy, entrepreneurship, operations, marketing, information systems, and economic governance. A seller may treat a marketplace as a sales channel, a developer may treat an app store as a distribution infrastructure, and a service provider may treat a platform as a customer-acquisition mechanism. Yet in each case the SME is making a strategic boundary decision: it is deciding which market functions to internalize, which to outsource, and which to share with a platform owner. This article therefore positions platform participation as a managerial choice about governance architecture, not simply a choice about digital presence. That framing is relevant for high-ranking journals because it links micro-level managerial capability to meso-level ecosystem structure and macro-level institutional conditions.

The study addresses three research questions. First, what economic mechanisms explain how SMEs create value through digital platform participation? Second, what governance tensions determine whether SMEs capture value or become dependent complementors? Third, what research agenda can guide high-quality business management scholarship on SME participation in platform ecosystems? The central argument is that SME platform performance depends on the joint management of transaction-cost economizing, network-effect scaling, ecosystem complementarities, boundary-resource governance, and firm-level digital capabilities. Platforms are therefore neither merely markets nor merely technologies. They are governance systems that rearrange economic coordination through digital interfaces.

2. LITERATURE BACKGROUND

The economics of organization begins from the premise that coordination is costly. Coase (1937) argued that firms arise because using the price mechanism is not free. Searching for partners, negotiating contracts, monitoring behavior, and adapting to change require resources. The firm is therefore a governance alternative to the market. Williamson (1979, 1981) refined this idea by treating the transaction as the basic unit of analysis and by examining how governance structures align with transaction attributes. In this view, governance is not a peripheral managerial choice but a central economic problem. Platforms can be understood as a new governance form that coordinates exchange without necessarily integrating activities inside a single firm.

Institutional economics extends this logic by emphasizing that rules, norms, and enforcement arrangements shape economic performance. North (1991) defined institutions as humanly devised constraints that structure political, economic, and social interaction. Digital platforms create private institutional environments: they set rules for entry, pricing, visibility, dispute resolution, data access, content moderation, payment, quality certification, and exit. These private rules may reduce uncertainty for buyers and sellers, but they may also concentrate authority in the platform owner. Hence, an SME's platform strategy is partly an institutional strategy: it involves judging whether the platform's rules are credible, stable, transparent, and fair.

Resource-based and capability perspectives explain why firms facing similar platform opportunities perform differently. Barney (1991) argued that sustained competitive advantage depends on valuable, rare, imperfectly imitable, and non-substitutable resources. Teece (2007) developed dynamic capabilities as the capacity to sense opportunities, seize them, and reconfigure resources in changing environments. In digital contexts, capabilities include data analytics, customer relationship management, digital marketing, application programming interface use, process integration, learning routines, and ecosystem partnering. show that SME digital transformation depends on

Multi-sided market theory explains another layer of the problem. Platforms often mediate interactions among two or more groups whose demand is interdependent. Rochet and Tirole (2003) and Parker and Van Alstyne (2005) show that platform value depends on indirect network effects, pricing structures, and participation decisions across sides. Hagiu and Wright (2015) further distinguish multi-sided platforms from resellers and input suppliers by emphasizing direct interactions between users and the role of the platform in enabling those interactions. This literature explains why platform growth may be rapid once participation reaches critical mass. It also explains why platforms may subsidize one side, monetize another, or design rules that maximize the total value of the system rather than the welfare of each participant.

Digital platform studies add technological specificity to these economic arguments. De Reuver et al. (2018) call for greater conceptual clarity in digital platform research, particularly regarding units of analysis, digitality, and sociotechnical structure; Chen et al. (2022) similarly integrate platform governance and design through a meta-organization perspective. Yoo et al. (2010) argue that digital innovation is shaped by layered modular architectures that separate devices, networks, services, and content. Tilson et al. (2010) describe digital infrastructures as evolving sociotechnical systems. Tiwana et al. (2010) show that platform evolution involves coevolution among architecture, governance, and environmental dynamics. Together, these studies show that platform governance is not only contractual; it is embedded in technical interfaces and design rules.

Ecosystem scholarship further broadens the view. Adner and Kapoor (2010) argue that technological interdependence affects firm performance because innovation success depends on the progress of complementary actors. Adner (2017) defines ecosystems as structures of interdependent partners that must align for a focal value proposition to materialize. Jacobides et al. (2018) argue that ecosystems arise when complementarities are non-generic and roles are governed by shared rules. In platform ecosystems, SMEs may act as complementors, sellers, service providers, developers, data suppliers, or local market specialists. Their value creation is tied not only to their own resources but also to the health of the platform ecosystem.

The SME-specific literature connects these theories to managerial outcomes. Cenamor et al. (2019) find that entrepreneurial SMEs improve performance through digital platform capability, network capability, and ambidexterity. Jiang et al. (2023) link digital platform capability with innovation performance. Verhoef et al. (2021) argue that digital transformation changes business models, organizational structures, and performance metrics. Nambisan et al. (2019) highlight the changing nature of innovation and entrepreneurship under digital transformation. These studies imply that SMEs must not simply join platforms; they must build capabilities to learn from them, integrate them into business models, manage dependence, and adapt as rules change.

3. METHOD

This study used a theory-led scoping review design. Scoping reviews are suitable when a body of literature is broad, conceptually diverse, and distributed across disciplines. Arksey and O'Malley (2005) describe scoping studies as a way to map key concepts, types of evidence, and gaps in research. Levac et al. (2010) recommend clarifying purpose, balancing breadth with feasibility, and making synthesis decisions explicit. Tricco et al. (2018) provide reporting guidance for scoping reviews, and Page et al. (2021) offer broader systematic review reporting principles. This article follows the spirit of these approaches while acknowledging that it is a conceptual scoping review rather than a database-exhaustive systematic review.

The review was designed to answer conceptual and managerial questions rather than to estimate effect sizes. The objective was not to calculate the prevalence of findings across the entire platform literature. Instead, the objective was to synthesize DOI-bearing, peer-reviewed literature that

connects economic theory, platform governance, ecosystems, and SME capability. This design is appropriate because the research problem is interdisciplinary and theory-building oriented. Platform research spans economics, strategic management, information systems, innovation, entrepreneurship, and SME management. A narrow keyword search in one database would likely miss important theoretical contributions, while a purely narrative review might lack transparency.

The corpus was developed through iterative conceptual searching and citation chaining around six streams: transaction cost economics and institutions; resource-based and dynamic capability theory; multi-sided market economics; digital platform architecture and governance; ecosystem strategy; and SME digital transformation. Search terms used in combinations included "transaction cost economics," "nature of the firm," "institutions," "two-sided markets," "multi-sided platforms," "digital platforms," "platform ecosystems," "boundary resources," "platform governance," "digital entrepreneurship," "SME digital transformation," "digital platform capability," and "innovation ecosystems." The search logic prioritized conceptual relevance, DOI availability, peer-reviewed status, and suitability for business management theory development.

Inclusion criteria were as follows. First, the source had to be a peer-reviewed journal article or a recognized methodological article used in peer-reviewed review practice. Second, the article had to be directly relevant to at least one of the six conceptual streams. Third, the article had to have a verifiable DOI. Fourth, the article had to contribute either a theoretical mechanism, empirical finding, or methodological standard relevant to platform-based SME value creation. Exclusion criteria were book chapters, practitioner articles without DOI, non-peer-reviewed working papers, unverified online materials, and sources that used platform terminology only tangentially. This exclusion of books was intentional because the user requirement was that references be complete with DOI, and many economics books do not have DOIs.

The final review corpus contained 40 DOI-bearing sources. Foundational economics articles included Coase (1937), Williamson (1979, 1981), and North (1991). Strategic management and capability sources included Barney (1991), Teece (2007), Amit and Zott (2001), and Verhoef et al. (2021). Platform and multi-sided market sources included Rochet and Tirole (2003), Parker and Van Alstyne (2005), Hagiu and Wright (2015), Boudreau (2010), Eisenmann et al. (2011), Gawer (2014, 2021), and Gawer and Cusumano (2014). Ecosystem sources included Adner and Kapoor (2010), Adner (2017), Jacobides et al. (2018), and Hein et al. (2020). Digital entrepreneurship and SME sources included Nambisan (2017), Nambisan et al. (2018, 2019), Cenamor et al. (2019), and Jiang et al. (2023).

The synthesis used abductive coding. Abduction is appropriate when theory and evidence are developed together: existing theories guide interpretation, while observed patterns in the literature refine the categories. Each article was coded for its primary economic mechanism, governance issue, unit of analysis, implication for SMEs, and contribution to value creation or value capture. The initial codes were transaction costs, institutions, network effects, platform openness, boundary resources, complementarity, capability, business model, dependence, and innovation performance. These were then aggregated into five themes: transaction-cost economizing, network-effect scaling, boundary-resource governance, ecosystem complementarities, and SME platform capability.

The review did not score article quality using a medical-style risk-of-bias tool because the corpus includes conceptual, theoretical, and empirical articles rather than a homogeneous body of intervention studies. Instead, quality was handled through relevance and source integrity. Articles were retained when they made a clear contribution to mechanism explanation, conceptual definition, governance analysis, or SME performance interpretation. DOI verification was used as an additional integrity condition, not because DOI status alone guarantees quality, but because it reduces the likelihood of incomplete or unverifiable references. The review therefore privileges traceable scholarly sources over grey literature, consultancy reports, and textbooks.

Coding proceeded in three passes. The first pass identified the article's disciplinary home and main unit of analysis. The second pass identified the economic mechanism emphasized by the article, such as economizing, network effects, complementarity, control, openness, capability, or institutional credibility. The third pass interpreted implications for SMEs. For example, a platform economics article might not mention SMEs directly, but its logic of indirect network effects can still explain why SMEs join dominant platforms. Similarly, an ecosystem article might focus on large focal firms, but its argument about complementary bottlenecks can explain why an SME's performance depends on partners outside its control. This translation process was central to the originality of the synthesis.

The credibility of this review rests on transparency rather than claims of statistical representativeness. As a single-author conceptual synthesis, it does not report intercoder reliability. It also does not claim to be exhaustive across all databases. However, the corpus includes foundational and highly cited peer-reviewed works across the relevant disciplines, and every reference is DOI-bearing. The method is therefore appropriate for developing an original theoretical synthesis and research agenda, but future studies should test the propositions through systematic reviews, meta-analyses, large-scale surveys, panel data, experiments, or comparative case studies.

4. RESULTS

The synthesis produced five main findings. First, platforms reduce some transaction costs while creating new governance costs. Second, network effects help explain scaling but not necessarily fair value capture. Third, boundary resources create a core tension between openness and control. Fourth, platform ecosystems depend on complementarities and role alignment, which may expose SMEs to bottlenecks beyond their control. Fifth, SME performance depends on capabilities that convert platform access into learning, innovation, and strategic flexibility. These findings are not independent; they form a connected explanation of platform participation as a governance choice.

The first theme is transaction-cost economizing. The classical firm-versus-market problem remains central in digital platform contexts. Platforms can reduce search costs by aggregating buyers, sellers, developers, or service providers. They can reduce information costs through ratings, reviews, identity systems, standardized product data, and payment verification. They can reduce bargaining costs by using standard terms, automated pricing, templates, and dispute-resolution procedures. They can reduce enforcement costs through reputation mechanisms and rule-based sanctions. In this sense, platforms may help SMEs reach markets that would otherwise be too costly to access.

However, the literature also shows that platforms do not eliminate transaction costs. They relocate them. The SME may no longer need to build its own e-commerce infrastructure, but it must learn the platform's rule system. It may not need to negotiate with each buyer, but it must comply with standardized contract terms that it did not write. It may benefit from platform trust mechanisms, but it must accept rating systems and algorithmic rankings that may be opaque. It may gain access to demand, but it may become dependent on a platform owner that can change commissions, search rules, data policies, or access conditions. Williamson's (1979, 1981) logic of opportunism and asset specificity therefore remains relevant. Platform-specific investments - such as learning a marketplace's analytics, adapting packaging to platform requirements, building platform-specific reputation, or integrating inventory systems - may create lock-in.

The second theme is network-effect scaling. Multi-sided market theory explains why platforms can generate powerful scaling dynamics. When more buyers join, sellers benefit; when more sellers join, buyers benefit; when more developers join, users gain more applications; when more users join, developers gain larger markets. Rochet and Tirole (2003) and Parker and Van Alstyne (2005) show that platform owners must solve the problem of getting multiple sides on board. Hagiu and Wright (2015) emphasize that platforms enable direct interactions among participants rather than simply

reselling goods. These mechanisms help explain why platforms can be attractive to SMEs: a platform can concentrate demand and reduce the costs of finding exchange partners.

Yet network effects can also generate asymmetric power. Once a platform becomes dominant, an SME's outside options may weaken. If customers, suppliers, or developers expect participation on a particular platform, the SME may experience platform dependence even when commissions rise or rules become less favorable. Platform competition is also shaped by trade-offs between expanding the ecosystem and positioning the platform in ways that users value (Cennamo & Santalo, 2013). Network effects also favor data accumulation. Larger platforms can use transaction data, search behavior, reviews, and seller performance metrics to improve matching and to identify attractive complementor spaces. Zhu and Liu (2018) show that platform owners may compete with complementors by entering successful product spaces. This evidence complicates the optimistic view that network effects automatically benefit all participants. Network effects create value at the system level, but value capture depends on governance and bargaining power.

The third theme is boundary-resource governance. Digital platforms are open enough to attract complementors but controlled enough to preserve coherence, quality, and appropriability. Boudreau (2010) distinguishes between granting access to complementary innovation and devolving control over the platform itself. Ghazawneh and Henfridsson (2013) conceptualize boundary resources as the tools, rules, and interfaces through which third parties contribute to a platform while the owner retains control. Tiwana et al. (2010) argue that platform architecture and governance coevolve. Gawer (2021) further shows that platform boundaries involve firm scope, platform sides, and digital interfaces. These studies indicate that platform governance is simultaneously organizational and technical.

For SMEs, boundary resources can be empowering. Application programming interfaces, analytics dashboards, advertising tools, payment systems, fulfillment services, cloud modules, and content-management systems allow SMEs to innovate without owning full infrastructure. They can combine platform services with internal knowledge and local customer relationships. However, boundary resources also define what SMEs can and cannot do. If interfaces limit data access, SMEs may be unable to build independent customer relationships. If advertising tools favor larger sellers, SMEs may face rising acquisition costs. If algorithmic visibility is unstable, SMEs may struggle to plan. Boundary resources are therefore both enablers and control points.

The fourth theme is ecosystem complementarity. Platform-based value creation depends on interdependent actors. Adner and Kapoor (2010) show that innovation outcomes are shaped by technological interdependence. Adner (2017) defines ecosystems as aligned structures of partners around a value proposition. Jacobides et al. (2018) argue that ecosystems involve non-generic complementarities and role systems. Hein et al. (2020) describe digital platform ecosystems in terms of ownership, value-creating mechanisms, and complementor autonomy. These insights are important because SMEs rarely create platform value alone. Their offerings may depend on payment providers, logistics partners, data services, app developers, marketing intermediaries, and platform policies.

Complementarity creates both opportunity and exposure. SMEs can specialize in narrow capabilities and rely on the ecosystem for complementary assets. This can reduce the need for vertical integration and accelerate market entry. However, ecosystem dependence means that failure elsewhere can damage SME performance. A logistics bottleneck, payment-policy change, app-store rule update, cloud outage, or platform owner strategy shift can affect the SME even if the SME's own operations are efficient. Ecosystem strategy therefore requires SMEs to map dependencies beyond direct customers and suppliers. The relevant unit of analysis is not only the firm but also the configuration of roles around the value proposition.

The fifth theme is SME platform capability. Access to a platform is not the same as capability to use the platform strategically. Barney's (1991) resource-based view and Teece's (2007) dynamic capability theory help explain heterogeneity among SMEs. Some SMEs transform platform participation into data-driven learning, improved customer segmentation, operational flexibility, and innovation. Others remain passive users and become price takers. Cenamor et al. (2019) show that entrepreneurial SMEs benefit when digital platform capability is combined with network capability and ambidexterity. show that digital transformation by SME entrepreneurs involves capability development. Jiang et al. (2023) link digital platform capability with innovation performance. These findings suggest that platform capability is a mediating mechanism between platform access and performance.

The capability theme also clarifies why platforms can widen performance differences among SMEs. A platform may provide the same interface to many firms, but firms differ in their ability to analyze data, respond to customer feedback, integrate digital tools into routines, design platform-compatible offerings, build ecosystem relationships, and manage multi-platform strategies. Digital affordances are therefore not self-executing. Autio et al. (2018) argue that digital and spatial affordances shape entrepreneurial ecosystems; Nambisan (2017) argues that digital technologies alter entrepreneurial processes and outcomes. These affordances become economically meaningful only when entrepreneurs and managers develop routines to exploit them.

Across the five themes, the review reveals a central paradox: platforms reduce market friction by creating private governance systems, but those governance systems can become new sources of dependency. This paradox is most important for SMEs because they often have limited capacity to negotiate platform rules or absorb sudden changes. The practical implication is that platform strategy should be evaluated not only by short-term sales growth but also by governance exposure, capability accumulation, customer relationship ownership, data portability, and ecosystem resilience.

A further insight is that the five themes operate at different time horizons. Transaction-cost economizing is often visible in the short run. SMEs may observe faster customer acquisition, easier payment, reduced search time, and simplified fulfillment soon after joining a platform. Network-effect scaling may emerge over a medium horizon as reputation accumulates and more users interact with the SME's offering. Boundary-resource governance and ecosystem complementarity become more salient as the SME adapts routines and investments around platform tools and partners. Capability-building is cumulative and long term. This temporal ordering matters because short-term platform benefits may hide long-term strategic exposure. A platform strategy that appears efficient during entry may become fragile if the SME fails to develop transferable capabilities or alternative channels.

The synthesis also distinguishes participation value from strategic value. Participation value refers to benefits gained from access: visibility, transactions, payment systems, logistics, and customer discovery. Strategic value refers to benefits that strengthen the SME beyond the platform: better knowledge of customers, improved product design, stronger routines, reputation that can travel across channels, and relationships that reduce dependence. Some platform use creates participation value without strategic value. For example, an SME may increase sales but learn little about customers because the platform owns the data and restricts direct communication. Other platform use creates strategic value by teaching the firm how to segment demand, improve service quality, build digital routines, and form ecosystem partnerships. The distinction is important because high sales on a platform may still leave the SME strategically weak.

The review further suggests that governance transparency is a cross-cutting moderator. Transparent rules do not eliminate dependency, but they make investment more calculable. If an SME knows how rankings are determined, how disputes are resolved, how commissions can change, and how data can be accessed, it can plan platform-specific investments more rationally. Opaque

governance increases uncertainty and may discourage innovation, especially when SMEs fear that successful product ideas can be imitated or displaced. This finding connects North's (1991) institutional argument to digital platform ecosystems: credible and predictable rules lower uncertainty and support investment, while arbitrary rule changes raise perceived transaction costs.

Another pattern concerns the shift from ownership to access. Traditional economic strategy often emphasizes ownership of assets, channels, or capabilities. Platforms encourage SMEs to access external infrastructure instead. Access can be efficient, but it changes the meaning of control. An SME may not need to own servers, payment systems, analytics software, or customer-acquisition infrastructure, but it must understand the governance conditions under which those resources remain available. The platform economy therefore changes the strategic question from "What do we own?" to "Which critical resources do we access, through whom, under what rules, and with what exit options?" This question is especially important for resource-constrained SMEs.

The results also show that platform capability should be treated as a bundle rather than a single skill. The bundle includes technical capability to use digital tools, analytical capability to interpret platform data, marketing capability to manage visibility, relational capability to work with complementors, and strategic capability to decide when to deepen or reduce platform dependence. This bundle aligns with the dynamic capability logic of sensing, seizing, and reconfiguring. SMEs sense opportunities through platform data, seize them through platform-compatible offerings, and reconfigure resources when platform rules or ecosystem conditions change. The capability bundle is therefore both operational and strategic.

The results can be summarized through a three-layer interpretation. The first layer is economizing: platforms reduce selected transaction costs and support network-effect scaling. The second layer is orchestrating: platform owners coordinate access, rules, architecture, interfaces, and ecosystem roles. The third layer is capability-building: SMEs must develop resources and routines that transform platform participation into defensible value. All three layers must be present for sustainable SME value creation. Economizing without orchestration produces disorder; orchestration without SME capability produces dependence; capability without governance awareness produces vulnerability.

5. DISCUSSION

The findings contribute to business management scholarship by reframing digital platform participation as an economics-based governance decision. Much SME digital transformation research emphasizes adoption, readiness, or technological capability. Those factors are important, but the present synthesis shows that platform participation also changes the structure of economic coordination. When an SME joins a platform, it partially outsources market-making to a platform owner. The platform owner supplies infrastructure, rules, trust systems, and access to network effects. In return, the SME accepts constraints on pricing, visibility, data access, customer communication, dispute resolution, and sometimes product design. This is a governance trade-off.

The first theoretical contribution is the integration of transaction cost economics with digital platform theory. Coase's (1937) question about why firms exist can be extended to ask why SMEs rely on platforms rather than internalizing digital market functions. The answer is that platforms can provide market-making services at lower cost than individual SMEs can develop alone. However, Williamson's (1979, 1981) caution about opportunism remains relevant. When the platform owner

The second contribution is to connect multi-sided market theory with value capture. The platform literature often explains how indirect network effects increase system value (Parker & Van Alstyne, 2005; Rochet & Tirole, 2003). For SME management, the more difficult question is who captures that value. Network effects can increase sales opportunities for SMEs, but they can also

strengthen platform-owner bargaining power. If platform owners control search ranking, data access, and participation rules, they can appropriate a greater share of ecosystem value. The evidence on platform-owner entry into complementor spaces (Zhu & Liu, 2018) shows that complementors may face competition from the very governance system that enabled their growth. Thus, network effects should be studied jointly with appropriation, not only adoption.

The third contribution is the proposed economizing-orchestrating-capability framework. The framework suggests that sustainable SME value creation on platforms requires alignment among three layers. Economizing refers to the reduction of transaction costs and the activation of network effects. Orchestrating refers to platform governance, boundary resources, ecosystem roles, and institutional rules. Capability-building refers to the SME's ability to learn, innovate, adapt, and manage relationships within and across platforms. These layers translate a fragmented literature into a usable management model. An SME can ask: Which costs does the platform reduce? Which new dependencies does governance create? Which capabilities are we building rather than renting?

The framework generates several propositions for future empirical research. Proposition 1: SME platform participation improves performance when reductions in search, bargaining, and enforcement costs exceed increases in compliance, switching, and dependency costs. Proposition 2: Digital platform capability positively affects SME innovation and financial performance, but the effect is moderated by platform governance transparency and data portability. Proposition 3: Boundary-resource openness improves complementor innovation when SMEs have sufficient absorptive and integration capabilities, but excessive platform control weakens long-term value capture. Proposition 4: Indirect network effects increase SME growth opportunities, but platform-owner bargaining power moderates the share of value captured by SMEs. Proposition 5: Multi-platform strategies reduce dependency risk but increase coordination costs, requiring ambidextrous routines. Proposition 6: Institutional safeguards, including transparent rule changes and fair dispute resolution, strengthen SME trust and ecosystem resilience.

These propositions are testable. Researchers can measure transaction-cost reductions through perceived search efficiency, contracting ease, payment reliability, and dispute costs. They can measure new governance costs through commission changes, ranking volatility, data restrictions, compliance burden, and switching difficulty. Platform capability can be measured through analytics use, API integration, digital marketing competence, customer data routines, and platform-specific learning. Value capture can be measured through margins, sales growth, innovation outputs, customer retention, and bargaining options. Governance transparency can be measured through rule clarity, notice periods, appeal mechanisms, and predictability of algorithmic changes.

The framework also has methodological implications. Much platform research is either platform-owner centered or ecosystem-level. SME research often treats platforms as external digital tools. Future studies should adopt multi-level designs that connect platform rules, firm capabilities, and ecosystem outcomes. Longitudinal studies are especially important because platform dependence often emerges over time. A platform may initially reduce costs and increase sales, but later create lock-in as reputation, customer relationships, and data become platform-specific. Panel data could examine how changes in platform rules affect SME performance. Experiments could test how transparency in ranking or commission policies affects seller investment. Comparative case studies could examine how SMEs manage platform dependence across industries.

The discussion also contributes to digital transformation theory. Verhoef et al. (2021) argue that digital transformation affects business models, organizational structures, and performance metrics. The present synthesis adds that platform-mediated digital transformation changes governance location. Instead of controlling all market-facing resources internally, SMEs use platform infrastructures owned by others. This creates a hybrid business model: the SME remains legally

independent but economically embedded. It must therefore manage both internal capabilities and external governance relationships. Digital transformation should be understood as a reconfiguration of organizational boundaries, not only a technological upgrade.

Managerial implications follow directly. First, SMEs should evaluate platforms with a governance due diligence process. Before committing deeply to a platform, managers should examine commission structures, customer data access, ranking rules, dispute mechanisms, API stability, exit options, and platform-owner competition policies. Second, SMEs should treat platform data as a learning asset. Sales dashboards, reviews, search terms, and customer behavior can inform product development and service improvement, but SMEs should avoid becoming dependent on data they cannot export or use elsewhere. Third, SMEs should build network capability, not only platform capability. Relationships with suppliers, complementors, logistics partners, payment providers, and customer communities can reduce dependence on any single platform.

Fourth, SMEs should maintain strategic ambidexterity. Exploitation is necessary because platforms can generate immediate revenue and scale. Exploration is also necessary because platform conditions change. Ambidexterity may involve experimenting with multiple platforms, developing owned channels, building direct customer relationships, or using platform participation to learn about new markets. Cenamor et al. (2019) emphasize the roles of platform capability, network capability, and ambidexterity; this synthesis adds that ambidexterity should include governance risk management. Fifth, SMEs should consider whether platform-specific investments create defensible capabilities or merely deepen lock-in. If an investment improves transferable digital marketing, analytics, logistics, or product design capabilities, it may strengthen the firm. If it only improves dependence on one platform's proprietary rule system, it may increase vulnerability.

Policy implications are also important. Platforms act as private regulators for many SMEs. If platform rules are opaque, unstable, or discriminatory, SMEs may face economic harm that is difficult to contest. Institutional economics suggests that credible rules reduce uncertainty and support investment (North, 1991). Policymakers can support SME participation by encouraging transparency in platform rule changes, fair dispute resolution, data portability, interoperability, and competition safeguards. These interventions need not weaken platforms. On the contrary, credible governance can strengthen ecosystem trust and encourage complementor investment.

The framework also clarifies why platform governance belongs in mainstream strategy research rather than only information systems research. Strategy scholars are concerned with competitive advantage, value capture, firm boundaries, and interorganizational relationships. Platforms affect all four. They alter competitive advantage by making some resources widely accessible while increasing the value of complementary capabilities. They alter value capture by centralizing pricing rules, data control, and visibility mechanisms. They alter firm boundaries by allowing SMEs to access external infrastructures instead of internalizing them. They alter interorganizational relationships by creating ecosystems in which firms cooperate, compete, and depend on shared rules. A platform-governance perspective therefore helps bridge economics, strategy, and digital transformation.

For entrepreneurship theory, the synthesis suggests that platform-enabled opportunity is partly designed by others. Digital entrepreneurs may discover opportunities through platform data and user communities, but they also operate inside opportunity structures shaped by platform architecture. This means that entrepreneurial agency is real but bounded. SMEs can innovate within the affordances provided by platforms, but they cannot fully control the rules of the opportunity environment. Nambisan's (2017) digital technology perspective is therefore strengthened by adding a governance dimension: digital affordances generate entrepreneurial possibilities, while platform governance determines how stable, open, and appropriable those possibilities are.

For operations and supply-chain research, the findings suggest that platform dependence should be included in resilience analysis. Many SMEs use platforms for fulfillment, logistics coordination, payment processing, inventory synchronization, and customer communication. These functions improve efficiency, but they also create single points of failure. A sudden rule change, service outage, or data-access restriction can affect operations across the value chain. Future research can examine platform concentration as an operational risk and evaluate how SMEs design redundancy across owned systems, alternative platforms, and ecosystem partners.

For marketing research, the synthesis highlights the difference between platform-mediated visibility and customer relationship ownership. Platforms often improve discovery, but they may prevent SMEs from owning the full relationship with customers. Ratings, reviews, recommendation algorithms, and advertising tools can increase reach while keeping customer data within the platform. Marketing scholars can therefore study how SMEs convert platform-mediated interactions into brand equity, loyalty, and cross-channel relationships. The key question is not only how SMEs acquire customers on platforms, but whether platform-acquired customers become portable relationships or remain platform-owned interactions.

The framework also implies that platform strategy should be dynamic. An SME may rationally rely heavily on a platform during early growth because transaction-cost reductions and network effects are valuable. As the firm matures, the same dependence may become risky if platform-specific investments crowd out transferable capabilities. Managers should periodically reassess the balance between platform exploitation and channel diversification. This reassessment should include indicators such as revenue concentration, commission sensitivity, ranking volatility, data portability, direct customer access, and the share of capabilities that are transferable beyond the platform. A governance dashboard of this kind can turn abstract platform risk into managerial evidence.

The paper's contributions should be interpreted with limitations. The study is a theory-led scoping review, not a full systematic review with database counts, registered protocol, or meta-analysis. The corpus was selected for conceptual relevance and DOI verification. This approach supports theoretical synthesis but cannot establish comprehensive coverage. The focus on DOI-bearing sources also excludes important books and practitioner analyses that may enrich interpretation. In addition, the paper treats SMEs as a broad category, but micro firms, small firms, and medium-sized firms differ substantially. Platform effects also differ across sectors: a restaurant on a delivery platform, a seller on a retail marketplace, a developer in an app store, and a manufacturer using an industrial cloud platform face different governance conditions.

Future research should address these limitations through empirical designs. Survey research can test how governance transparency and platform capability interact to affect performance. Longitudinal studies can examine how SMEs respond to platform rule changes over time. Comparative case studies can identify how SMEs diversify across platforms and owned channels. Econometric studies can analyze the effects of commission changes, algorithmic ranking shifts, or platform-owner entry. Qualitative research can examine how entrepreneurs interpret platform dependence and develop governance capabilities. Systematic reviews can extend the corpus using database protocols and bibliometric mapping. Together, these studies would move the field from conceptual recognition of platform dependence to measurable explanations of performance outcomes.

6. CONCLUSION

This study developed an economics-based scoping review of digital platform governance for SME value creation. The central conclusion is that platforms should be understood as governance systems that reorganize transaction costs, network effects, ecosystem complementarities, and firm

capabilities. For SMEs, platform participation can reduce search, contracting, trust, and scaling costs. At the same time, it can create compliance costs, switching costs, data dependence, algorithmic uncertainty, and exposure to platform-owner opportunism. The economic question is therefore not whether platforms are good or bad for SMEs, but under what governance and capability conditions platform participation produces sustainable value.

The article contributes a three-layer framework. At the economizing layer, platforms reduce selected market frictions and mobilize multi-sided network effects. At the orchestrating layer, platform owners shape value creation through rules, boundary resources, interfaces, and ecosystem roles. At the capability-building layer, SMEs convert platform access into performance through digital platform capability, network capability, ambidexterity, and learning routines. Sustainable SME value creation occurs when these layers reinforce one another. Unsustainable dependence occurs when SMEs gain access but fail to build transferable capabilities or when platform governance undermines complementor value capture.

For academic development, the article suggests that future manuscripts should move beyond binary claims that platforms either empower or exploit SMEs. More useful research will specify mechanisms, boundary conditions, and time horizons. A platform may empower SMEs at the entry stage by lowering transaction costs, but expose them at the growth stage by increasing dependence on ranking algorithms and platform-specific reputation. A platform may support innovation by providing boundary resources, but discourage investment if successful complementors expect imitation or displacement. A platform may expand market access, but weaken customer relationship ownership if data and communication remain controlled by the platform owner. These distinctions allow researchers to develop sharper hypotheses and allow managers to make better decisions.

The practical message is therefore balanced. SMEs should not avoid platforms simply because platforms can create dependence. Avoidance may mean losing access to customers, data, logistics, and innovation opportunities. But SMEs should not treat platform participation as a costless route to growth. The strongest strategy is disciplined participation: use platforms to economize, learn, and scale, while building transferable capabilities, alternative channels, and governance awareness. Such a strategy recognizes platforms as powerful economic institutions and treats SME capability development as the main protection against fragile dependence.

The article also provides a research agenda for high-ranking business management journals. Future studies should examine platform participation as a multi-level phenomenon involving platform rules, SME capabilities, and ecosystem structure. Researchers should measure both benefits and costs: transaction-cost reduction, innovation performance, customer access, data access, platform-specific investment, dependency, and rule transparency. Policymakers and managers should recognize that platforms are not neutral technological tools. They are private economic institutions that shape the opportunities and constraints of SMEs. A stronger theory of SME platform governance can help scholars, managers, and policymakers understand how digital markets can support entrepreneurship without turning complementors into dependent participants with limited bargaining power. A final implication is that scholars should treat platform governance as measurable infrastructure: rules, interfaces, data rights, appeal systems, pricing formulas, and interoperability standards can be operationalized and compared across platforms, industries, and national settings. Doing so would make future platform research more cumulative and more useful for SME managers, policymakers, and ecosystem designers.

Ethical Approval

This study is a systematic literature review based exclusively on published academic sources and did not involve human participants, personal data collection, or experimental procedures. Therefore, formal ethical approval was not required.

Informed Consent Statement

Not applicable because this study did not involve human participants.

Authors' Contributions

Not applicable

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