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The Inclusion-Dependency Paradox:
Platform-Orchestrated SME Participation and Asymmetric Value Capture in the ASEAN Digital Economy

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Abstrak
The Inclusion-Dependency Paradox: Platform-Orchestrated SME Participation and Asymmetric Value Capture in the ASEAN Digital EconomyPlatform ecosystems have become central infrastructures for small and medium-sized enterprise (SME) participation in emerging digital economies. While platform-mediated inclusion is widely associated with opportunity expansion, its structural consequences for autonomy and surplus distribution remain under-theorized. This article develops the concept of the Inclusion–Dependency Paradox to explain how platform-orchestrated SME participation simultaneously enhances value creation and intensifies structural dependence. Integrating platform ecosystem theory, resource dependence logic, value creation–value capture distinctions, and embeddedness scholarship, the analysis proposes a mechanism-based framework linking governance centralization, control over critical resources, and asymmetric value capture. Platform inclusion lowers entry barriers and expands market access, thereby increasing SME value creation capacity. However, concentrated control over algorithmic visibility, transactional infrastructure, and data flows reconfigures bargaining asymmetries and shapes surplus allocation. The model specifies a curvilinear relationship between inclusion and autonomy, suggesting that high levels of participation under centralized governance conditions amplify dependency risks. By reframing inclusion as structurally contingent rather than inherently empowering, this study advances a distribution-sensitive perspective on SME participation in digitally mediated markets.

Keywords
platform ecosystems; sme inclusion; value capture; resource dependence; algorithmic governance; digital economy

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1. Introduction

Digital platforms have become central infrastructures for small and medium-sized enterprise (SME) participation in emerging digital economies. Across Southeast Asia, millions of SMEs now rely on e-commerce marketplaces, super-app ecosystems, and digital service platforms to access customers, process payments, manage logistics, and expand market reach. Platform participation has lowered entry barriers, reduced search costs, and enabled micro-entrepreneurs to scale beyond geographically bounded demand. In policy discourse and practitioner narratives alike, platform-mediated inclusion is frequently celebrated as a catalyst of SME empowerment and economic democratization.

Yet this celebratory narrative obscures a more complex structural dynamic. While platforms expand opportunity spaces for SMEs, they simultaneously design and control the governance architectures within which participation occurs. Access rules, commission structures, algorithmic visibility rankings, data ownership policies, and monetization logics are determined by platform orchestrators. Participation, therefore, unfolds within a structured ecosystem governed by asymmetric control over critical resources. Inclusion is not equivalent to autonomy; it is participation under orchestrated conditions.

Existing scholarship offers important but partial explanations of this phenomenon. Platform ecosystem theory emphasizes how orchestrators design governance structures to align complementarities and stimulate value creation (Adner, 2017; Jacobides et al., 2018). Research on digital competition highlights strategic trade-offs between openness and control in multi-sided markets (Cennamo, 2021). Meanwhile, studies of digital entrepreneurship document how platforms enable new forms of SME participation and innovation (Nambisan et al., 2019). Collectively, this literature demonstrates that platforms expand value creation opportunities by aggregating demand, standardizing interfaces, and reducing transaction friction.

However, less attention has been devoted to how expanded participation reshapes dependency structures and value capture distribution within ecosystems. Resource dependence theory suggests that power asymmetries arise when one actor controls resources critical to another's survival (Pfeffer & Salancik, 1978; Emerson, 1962). In platform ecosystems, critical resources include access to user traffic, algorithmic visibility, data analytics, and payment infrastructure. SMEs may gain market access through platforms, yet become increasingly dependent on platform-controlled visibility and revenue flows. As dependency intensifies, bargaining power may shift toward the orchestrator, influencing how ecosystem value is distributed.

This distributional question is analytically distinct from total value creation. Value creation and value capture are separable processes (Lepak et al., 2007). Platform participation may increase aggregate ecosystem value by expanding market size and improving coordination efficiency. Yet the allocation of surplus among participants may remain uneven. When governance centralization enables platforms to appropriate disproportionate rents through commission fees, data monetization, or pricing control, SMEs may experience simultaneous opportunity expansion and surplus compression. Inclusion thus becomes structurally ambivalent.

Network and embeddedness research further complicates the picture. Participation within tightly structured ecosystems can generate relational stability and performance benefits (Uzzi, 1997). At the same time, overembeddedness may reduce strategic flexibility and increase vulnerability to unilateral rule changes. SMEs embedded within a dominant platform may face high switching costs, limited multi-homing options, and constrained direct access to end customers. Algorithmic management and visibility governance amplify this dynamic by mediating demand allocation through opaque ranking systems (Kellogg et al., 2020; Cutolo & Kenney, 2021). Formal independence coexists with operational dependence.

Despite these converging insights, the literature lacks an integrated explanation of how platform-driven SME inclusion simultaneously expands opportunity and deepens structural dependency. Research tends to emphasize either empowerment through digital access or dominance through platform power, but rarely theorizes the paradoxical coexistence of both dynamics at the ecosystem level. Moreover, while discussions of value capture in platform markets are growing, few studies explicitly connect governance design, dependency structure, and surplus distribution within the context of SME participation in emerging digital economies.

This article addresses that gap by advancing the concept of the Inclusion–Dependency Paradox. We argue that platform-orchestrated SME inclusion produces dual and interdependent effects. First, it enhances SME value creation capacity by lowering entry barriers, expanding market reach, and integrating complementary services. Second, it restructures resource dependence relations by centralizing control over critical ecosystem assets such as visibility algorithms, transactional infrastructure, and customer data. The interaction between these effects shapes asymmetric value capture outcomes.

The central research question guiding this study is:

Under what conditions does platform-orchestrated SME inclusion generate empowerment through expanded value creation, and under what conditions does it intensify structural dependency and asymmetric value capture?

To answer this question, we develop a mechanism-based conceptual framework integrating platform ecosystem governance, resource dependence theory, and value creation–value capture logic. Rather than treating inclusion as inherently beneficial or inherently exploitative, we theorize it as a structurally conditioned outcome shaped by governance centralization, resource criticality, and ecosystem positioning. By distinguishing opportunity expansion from surplus appropriation, we clarify how participation can coexist with vulnerability.

This study makes three contributions. First, it extends platform ecosystem theory by foregrounding dependency structure and surplus distribution as central analytical dimensions of inclusion. Second, it integrates resource dependence and value capture theory to explain how governance design shapes bargaining asymmetries in digitally mediated markets. Third, it introduces a paradox perspective to the study of SME digital participation, highlighting that inclusion may simultaneously enable growth and constrain autonomy.

Focusing on the ASEAN digital economy provides a theoretically salient context for this analysis. The region's rapid platform expansion and dense SME participation create fertile ground for observing how ecosystem governance reshapes market access and surplus allocation. Yet the conceptual model developed here is not region-bound; it offers a generalizable framework for understanding SME participation in platform-mediated markets across emerging digital economies.

2. Theoretical Foundations

Understanding the Inclusion–Dependency Paradox requires analytical integration across platform ecosystem governance, resource dependence theory, value creation–value capture logic, and embeddedness scholarship. Each theoretical pillar explains a distinct mechanism; taken together, they clarify how platform-mediated SME inclusion simultaneously expands opportunity and restructures structural power.

2.1 Platform Orchestration and Governance Design

Platform ecosystem theory reconceptualizes competition as structured interdependence among heterogeneous actors coordinated through a focal orchestrator (Adner, 2017; Jacobides et al., 2018). Unlike traditional industry models centered on firm boundaries, ecosystem logic emphasizes complementarities, alignment structures, and governance rules

that determine participation conditions. Platforms function not merely as intermediaries but as architects of interaction.

Governance design operates through access rules, interface standards, pricing mechanisms, and monetization levers (Tiwana, 2014). Openness attracts complementors and stimulates ecosystem growth; control safeguards value capture and strategic positioning (Cennamo, 2021). This duality is central to platform strategy: inclusion is instrumental to scale, yet scale increases the orchestrator's leverage over ecosystem participants.

Recent research underscores that governance choices shape not only ecosystem size but also surplus allocation. Adner and Kapoor (2010) demonstrate that value realization depends on the distribution of bargaining power among ecosystem actors. Complementors generate value through innovation and service provision, but the orchestrator's control over interfaces and standards influences how much of that value can be appropriated. Governance centralization therefore operates as a structural determinant of value capture.

Empirical studies of digital markets reveal that governance often evolves toward calibrated openness: broad access to stimulate participation, combined with selective control over monetization nodes. SMEs may freely join a platform, yet revenue flows remain mediated through orchestrator-controlled payment systems, ranking algorithms, and fee structures. Inclusion thus occurs within an architecture that is simultaneously enabling and constraining.

This insight is foundational for analyzing SME participation in the ASEAN digital economy. Platform growth expands participation opportunities, but governance design defines the structural conditions under which participation unfolds.

2.2 Resource Dependence and Structural Asymmetry

Resource dependence theory posits that power arises from asymmetric control over resources that are critical and non-substitutable (Emerson, 1962; Pfeffer & Salancik, 1978). Dependence is relational rather than absolute: an actor's vulnerability increases when alternatives are limited and switching costs are high.

In platform ecosystems, critical resources include user traffic, algorithmic visibility, transactional infrastructure, data analytics, and reputational signals. SMEs gain access to aggregated demand and standardized services through platform participation. However, this access often reduces direct control over customer relationships and pricing autonomy. When customer acquisition becomes algorithmically mediated, dependence shifts from market-based exchange to orchestrator-controlled allocation.

Casciaro and Piskorski (2005) refine dependence logic by demonstrating that power imbalance intensifies when mutual dependence is low and alternative exchange partners are scarce. In digital ecosystems characterized by strong network effects, multi-homing may be costly or operationally complex for smaller firms. As platform dominance increases, SMEs' outside options diminish, deepening structural asymmetry.

Recent empirical research on platform-dependent entrepreneurship confirms this pattern. Cutolo and Kenney (2021) show that entrepreneurs operating within dominant digital platforms experience both expanded opportunity and increased vulnerability to unilateral rule changes. Formal independence does not eliminate structural dependence; instead, it obscures it under the appearance of autonomy. Algorithmic governance reinforces this asymmetry by mediating access to visibility and revenue streams through opaque ranking systems (Kellogg et al., 2020).

Resource dependence theory therefore provides the mechanism linking inclusion to potential vulnerability. Access to platform resources enhances SME value creation capacity, yet concentrated control over those resources may increase dependence and reduce bargaining leverage.

2.3 Value Creation and Value Capture Distinction

Strategic management scholarship distinguishes between value creation—the generation of surplus through productive activity—and value capture—the appropriation of that surplus by specific actors (Lepak et al., 2007). Conflating these processes obscures distributional dynamics within ecosystems.

Platform participation often increases aggregate value creation by lowering transaction costs, aggregating demand, and facilitating complementarities. SMEs gain exposure to broader markets, digital infrastructure, and analytics tools that would otherwise be inaccessible. From a system-level perspective, inclusion enlarges the total value pool.

However, the allocation of surplus depends on relative bargaining power and governance design. Priem (2007) emphasizes that value capture is influenced by positioning and the ability to influence exchange terms. Adner and Kapoor (2010) demonstrate that actors occupying control points within ecosystems are better positioned to appropriate value, even when complementarities are symmetrically important.

In platform-mediated markets, control points often include payment gateways, search algorithms, and data infrastructures. Commission fees, advertising charges, and data monetization models become mechanisms through which orchestrators appropriate a share of complementor-generated value. As SMEs become more reliant on platform-mediated demand, their ability to negotiate these terms may decline.

The separation between creation and capture is analytically crucial for understanding the Inclusion–Dependency Paradox. Inclusion may expand the total value generated within the ecosystem while simultaneously increasing asymmetry in surplus distribution.

2.4 Embeddedness and Lock-in Dynamics

Economic action is embedded within social and structural networks (Granovetter, 1985). Embeddedness can enhance performance by fostering trust, information flow, and coordination efficiency. Uzzi (1997) demonstrates that embedded relationships reduce transaction uncertainty and improve exchange stability, yet overembeddedness may constrain flexibility and expose actors to systemic shocks.

In digital ecosystems, embeddedness takes a structural form. SMEs integrate operationally with platform-specific logistics systems, payment infrastructures, and data dashboards. Over time, these integrations create path dependence. Switching platforms may require rebuilding reputational metrics, customer reviews, and visibility histories. Such investments deepen relational and structural ties.

Network research indicates that peripheral actors in highly centralized networks possess limited influence over rule formation (Gulati et al., 2012). When platform ecosystems evolve toward centralization, SMEs positioned at the periphery face heightened vulnerability to governance shifts. Embeddedness stabilizes participation but reduces autonomy.

Recent studies of algorithmic management extend this insight. Visibility governance does not rely on explicit contractual restrictions; instead, it allocates demand through dynamic ranking systems. Dependence becomes operational rather than contractual, embedded in daily revenue flows (Kellogg et al., 2020). This form of control intensifies lock-in without formal exclusivity.

Embeddedness theory thus complements resource dependence logic by explaining how participation deepens over time, transforming initial opportunity expansion into structural reliance.

2.5 Integrative Theoretical Logic

Taken together, these theoretical pillars generate a coherent analytical framework. Platform ecosystem theory explains how orchestrators design governance structures that define

participation conditions. Resource dependence theory clarifies how control over critical ecosystem resources produces asymmetric bargaining power. Value creation–value capture theory distinguishes aggregate opportunity expansion from surplus appropriation. Embeddedness scholarship illuminates how repeated participation produces path dependence and lock-in.

The purpose of this table is to clarify how the article integrates four distinct theoretical traditions into a coherent mechanism-based framework. Rather than presenting the literature in an enumerative manner, the table specifies the analytical role of each theory and its contribution to explaining distributional outcomes within platform ecosystems.

Table 1. Theoretical Foundations and Their Analytical Roles in the Inclusion–Dependency Framework

Theoretical Lens	Core Mechanism	Critical Construct(s)	Role in the Model	Distributional Implication
Platform Ecosystem Theory	Governance design structures participation conditions	Orchestration, openness–control balance, ecosystem positioning	Specifies how platform architecture defines access rules and control over interaction interfaces	Governance centralization shapes bargaining asymmetry and surplus allocation
Resource Dependence Theory	Power arises from asymmetric control over critical and non-substitutable resources	Resource criticality, dependence asymmetry, switching costs	Explains how SME reliance on platform-controlled infrastructure intensifies structural vulnerability	Increased dependence reduces SME bargaining leverage in surplus negotiations
Value Creation–Value Capture Theory	Value generation and value appropriation are analytically separable processes	Value creation capacity, value capture, rent appropriation	Distinguishes aggregate ecosystem growth from surplus distribution among actors	Expanded ecosystem value does not guarantee proportional SME surplus retention
Embeddedness Theory	Repeated interaction produces relational and structural lock-in	Network embeddedness, path dependence, overembeddedness	Clarifies how operational integration deepens participation over time	Embedded lock-in amplifies exposure to unilateral governance shifts and surplus extraction

Source: Developed by the authors

By systematically aligning each theoretical pillar with its specific mechanism and distributional consequence, Table 1 clarifies the conceptual architecture underlying the Inclusion–Dependency Paradox. The table prevents theoretical inflation by differentiating the explanatory role of each lens and demonstrating how governance design, dependence asymmetry, surplus allocation, and embedded lock-in operate as complementary mechanisms within the model.

Recent empirical research supports each component of this logic. Studies of digital entrepreneurship document expanded SME opportunity through platform access (Nambisan et al., 2019). Research on platform-dependent entrepreneurs reveals increased vulnerability to unilateral governance shifts (Cutolo & Kenney, 2021). Analyses of algorithmic management demonstrate how visibility control shapes revenue distribution (Kellogg et al., 2020). Ecosystem scholarship highlights how structural positioning influences surplus realization (Kapoor, 2020).

The convergence of these findings suggests that SME inclusion in platform ecosystems cannot be evaluated solely in terms of access expansion. Inclusion reconfigures dependency relations and value distribution mechanisms. The theoretical integration developed here provides the foundation for conceptualizing this duality as a paradoxical structural outcome rather than as a normative judgment about platform power.

The next stage of analysis develops the Inclusion–Dependency Paradox as a mechanism-based model specifying how governance centralization, resource criticality, and ecosystem positioning interact to shape SME autonomy and asymmetric value capture outcomes.

3. Conceptual Development: The Inclusion–Dependency Paradox

The preceding theoretical foundations establish four analytically distinct but interrelated mechanisms: platform governance design, resource dependence asymmetry, value creation–value capture separation, and embeddedness-induced lock-in. The conceptual development integrates these mechanisms into a structured explanation of how SME inclusion within platform ecosystems generates dual outcomes. Inclusion expands opportunity structures while simultaneously reorganizing dependency relations and surplus distribution.

The argument proceeds in four stages. First, platform-orchestrated inclusion enhances SME value creation capacity. Second, governance-mediated resource control intensifies structural dependence. Third, governance centralization shapes asymmetric value capture. Fourth, the interaction among these mechanisms produces the Inclusion–Dependency Paradox, in which empowerment and vulnerability coexist under specific structural conditions.

3.1 Platform-Orchestrated Inclusion as Opportunity Expansion

Platform participation lowers traditional market entry barriers by aggregating demand, standardizing transactional interfaces, and embedding complementary services such as logistics, payment processing, and analytics. Ecosystem theory emphasizes that orchestrators reduce coordination frictions by aligning complementarities and modularizing participation requirements (Adner, 2017; Jacobides et al., 2018). SMEs gain access to scalable digital infrastructure without incurring the fixed costs of independent technological development.

Digital entrepreneurship research demonstrates that platforms expand opportunity sets by lowering search costs and enabling rapid experimentation (Nambisan et al., 2019). For SMEs operating in emerging digital economies, access to aggregated consumer bases increases potential revenue streams and geographic reach. Standardized onboarding procedures reduce uncertainty and accelerate participation. These mechanisms enlarge the total value created within the ecosystem.

This opportunity expansion is not incidental; it is central to platform strategy. Growth depends on attracting a critical mass of complementors whose offerings enhance platform attractiveness. Governance openness during expansion phases incentivizes SME entry and stimulates ecosystem density (Cennamo, 2021). From a system-level perspective, inclusion functions as a value amplification mechanism.

Proposition 1:
Platform-orchestrated inclusion increases SME value creation capacity by reducing entry barriers and expanding access to aggregated demand and complementary services.

3.2 Governance-Controlled Resources and Dependency Intensification

While inclusion enhances opportunity, it simultaneously reconfigures resource dependence relations. Access to demand becomes mediated by algorithmic visibility systems, search

rankings, and recommendation engines. Control over these allocation mechanisms constitutes control over revenue flows.

Resource dependence theory posits that actors controlling critical and non-substitutable resources possess structural leverage (Pfeffer & Salancik, 1978). In platform ecosystems, algorithmic visibility, user data, and payment infrastructures represent high-criticality resources. SMEs may rely on these resources for customer acquisition, pricing signals, and cash flow stability. As reliance deepens, outside options narrow.

Algorithmic management research illustrates how control mechanisms operate through visibility allocation rather than contractual restriction (Kellogg et al., 2020). Revenue volatility can result from ranking adjustments, promotional prioritization, or interface redesign. Cutolo and Kenney (2021) show that entrepreneurs embedded within dominant platforms experience heightened vulnerability to governance shifts despite formal independence.

Dependency intensification is not necessarily coercive; it often emerges through operational integration. As SMEs optimize operations around platform-specific analytics, logistics, and marketing tools, switching costs rise. Multi-homing becomes costly when performance metrics, customer reviews, and reputation scores are platform-bound.

Proposition 2:
Greater platform control over critical ecosystem resources (e.g., visibility algorithms, transactional infrastructure, data access) increases structural dependence of participating SMEs.

3.3 Governance Centralization and Asymmetric Value Capture

The distinction between value creation and value capture clarifies the distributional consequences of dependency. Even as inclusion expands total ecosystem value, governance design determines surplus allocation. Control points within the ecosystem enable orchestrators to appropriate rents generated by complementors (Adner & Kapoor, 2010).

Commission structures, advertising fees, preferential visibility pricing, and data monetization schemes represent mechanisms of value capture. As SMEs become more reliant on platform-mediated demand, their bargaining leverage over these mechanisms declines. The orchestrator's position at infrastructural chokepoints enables the extraction of a share of complementor-generated surplus without necessarily reducing aggregate ecosystem size.

Centralized governance amplifies this effect. When rule-setting authority and monetization levers are concentrated within the platform core, surplus appropriation becomes structurally asymmetric. Peripheral actors lack influence over fee structures and algorithmic criteria. Network research indicates that actors occupying central positions within highly centralized networks capture disproportionate benefits relative to peripheral participants (Gulati et al., 2012).

The asymmetry is not absolute; it varies with ecosystem design. Distributed governance models, transparent ranking systems, and multi-homing compatibility may moderate surplus concentration. Nonetheless, governance centralization increases the likelihood that value capture becomes skewed toward the orchestrator.

Proposition 3:
Higher degrees of platform governance centralization increase asymmetric value capture relative to participating SMEs.

3.4 Embeddedness, Lock-in, and the Inclusion–Dependency Paradox

Embeddedness theory explains how repeated interaction transforms participation into structural integration (Granovetter, 1985; Uzzi, 1997). As SMEs accumulate platform-specific assets—reputation scores, customer feedback histories, optimized advertising strategies—

exit costs increase. Embeddedness stabilizes exchange relationships and enhances short-term performance but may reduce strategic flexibility.

The interaction between opportunity expansion and dependency intensification produces a paradoxical outcome. Inclusion increases SME access to markets and enhances productivity. Simultaneously, reliance on orchestrator-controlled resources deepens structural dependence and constrains bargaining power. Value creation expands, yet value capture may become increasingly asymmetric.

The paradox emerges most strongly under conditions of high inclusion combined with high governance centralization. In such configurations, SMEs generate significant ecosystem value but remain constrained by orchestrator-defined monetization structures. Conversely, when governance is more distributed and multi-homing is viable, inclusion may enhance autonomy without proportionally increasing dependency.

The relationship between inclusion and autonomy is therefore non-linear. Initial participation enhances opportunity and performance. Beyond a threshold of dependency—driven by concentrated resource control and high switching costs—additional inclusion may reduce strategic discretion and amplify surplus asymmetry.

The following diagram specifies the non-linear relationship between SME inclusion and autonomy under varying governance conditions. It clarifies how increasing participation may initially enhance strategic discretion but, beyond a structural threshold, intensify dependency under centralized governance.

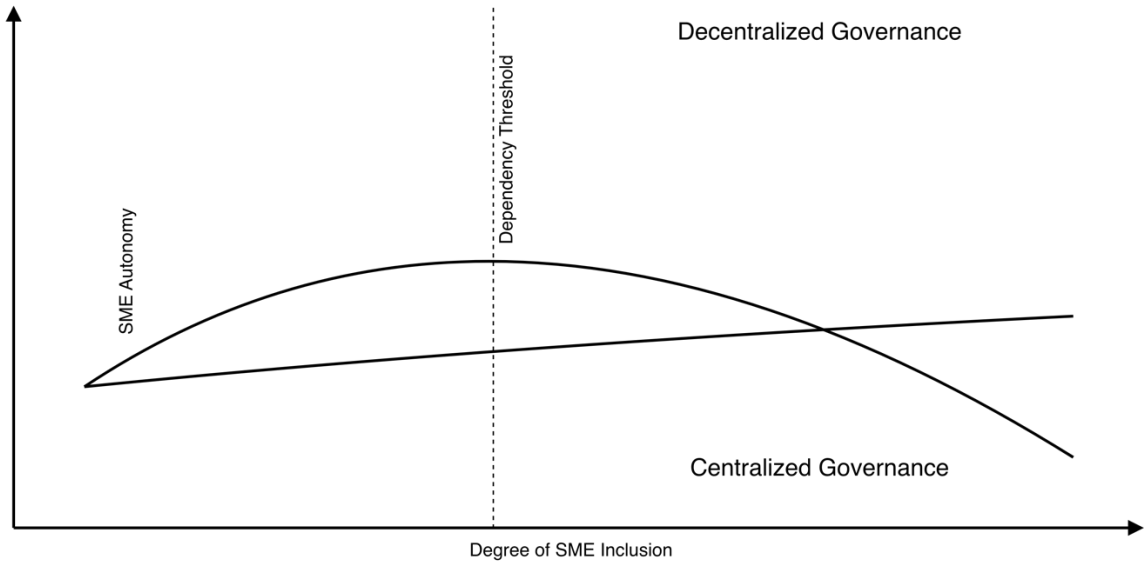

Figure 1. Curvilinear Relationship between SME Inclusion and Autonomy under Varying Governance Structures
Source: Developed by the authors

As illustrated in Figure 1, the relationship between inclusion and autonomy is structurally contingent upon governance centralization. Under decentralized governance, increasing participation maintains relatively stable autonomy. In contrast, centralized governance produces an inverted-U relationship: initial inclusion enhances autonomy, but beyond a dependency threshold, intensified resource control and switching costs reduce bargaining power and surplus retention capacity. The figure clarifies the article's non-linear specification and formalizes the structural conditions under which empowerment transitions into dependency.

Proposition 4:
The relationship between platform-orchestrated SME inclusion and SME autonomy is curvilinear, such that high levels of inclusion under centralized governance conditions intensify dependency and reduce bargaining power.

3.5 Conceptual Model

The Inclusion–Dependency Paradox emerges from the interaction of governance design, resource control, and surplus allocation within platform ecosystems. The conceptual model developed here positions platform governance architecture as the structural starting point of this dynamic. Governance design determines the terms of access, the degree of openness, and—crucially—the concentration of control over critical ecosystem resources such as visibility mechanisms, transactional infrastructure, and data flows. These design choices shape the conditions under which SMEs enter and operate within the ecosystem.

The framework below articulates the structural logic of the Inclusion–Dependency Paradox by linking governance architecture to resource control, dependency formation, and surplus distribution. It clarifies how opportunity expansion and structural asymmetry are co-produced within platform ecosystems.

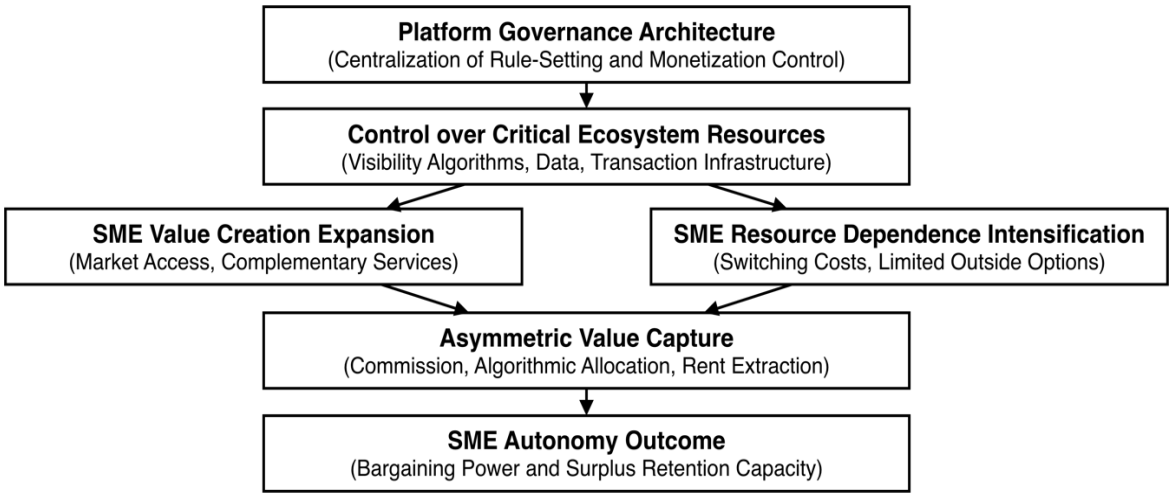

Figure 2. Structural Architecture of the Inclusion–Dependency Paradox
Source: Developed by the authors

Figure 2 integrates governance design, resource control, and surplus distribution into a single causal architecture. The model shows how centralized platform governance shapes control over critical ecosystem resources, which simultaneously expands SME value creation and intensifies structural dependence. These dual dynamics converge in asymmetric value capture, ultimately influencing SME autonomy and surplus retention capacity. By structuring the paradox as an interconnected mechanism rather than a descriptive tension, Figure 2 anchors the article's theoretical contribution in a coherent structural logic.Expanded access enlarges SME value creation capacity by connecting firms to aggregated demand and complementary services.

This expansion, however, simultaneously alters resource dependence relations. As SMEs increasingly rely on orchestrator-controlled infrastructures for revenue generation and customer acquisition, their exposure to unilateral governance shifts intensifies. Dependency becomes embedded not only contractually but operationally, as daily performance becomes mediated by algorithmic allocation and platform-defined monetization structures.

Structural dependence does not automatically translate into exploitative outcomes; its distributional implications are contingent upon the degree of governance centralization. When control over monetization levers and interface standards is highly concentrated, the orchestrator's ability to appropriate a disproportionate share of ecosystem surplus increases. Value creation may continue to grow, yet value capture becomes increasingly asymmetric. Conversely, more distributed governance arrangements, greater transparency in ranking mechanisms, and viable multi-homing options can moderate surplus concentration and preserve SME bargaining space.

This table specifies the structural stages through which platform-mediated inclusion evolves into asymmetric value capture. It distinguishes opportunity expansion from dependency formation and clarifies how governance architecture shapes surplus allocation.

Table 2. Structural Mechanisms Linking Inclusion to Asymmetric Value Capture

Mechanism Stage	Structural Driver	SME-Level Effect	Surplus Implication
Inclusion Expansion	Open access and standardized platform infrastructure	Expanded market reach and enhanced value creation capacity	Growth in total ecosystem value
Resource Control Concentration	Centralized control over visibility, data, and transaction systems	Reduced direct control over customer access and pricing signals	Emergence of structural bargaining asymmetry
Dependence Intensification	High resource criticality and increasing switching costs	Constrained outside options and declining negotiation leverage	Heightened vulnerability in surplus allocation
Monetization Structuring	Commission rules and algorithmic revenue allocation	Revenue variability and limited pricing discretion	Disproportionate value capture by the orchestrator
Embedded Lock-in	Accumulation of platform-specific assets and reputational metrics	Reduced strategic flexibility	Long-term exposure to asymmetric surplus extraction

Source: Developed by the authors

Table 2 clarifies how inclusion initially enlarges the value pool but progressively restructures bargaining conditions through centralized resource control. By separating structural drivers, firm-level consequences, and surplus implications, the table makes explicit the mechanism through which empowerment and dependency co-evolve within platform ecosystems.

The model therefore conceptualizes SME inclusion as structurally contingent rather than normatively predetermined. Empowerment and vulnerability are co-produced through the interaction of opportunity expansion and dependency intensification. High inclusion combined with high governance centralization produces the strongest manifestation of the paradox: SMEs experience expanded market access while facing reduced autonomy and constrained surplus appropriation. Where governance is less centralized and resource control more diffused, inclusion is more likely to translate into sustained strategic flexibility.

This paradox perspective reframes platform-mediated SME participation as a dual-effect phenomenon. Inclusion cannot be evaluated solely by entry rates, revenue growth, or digital adoption metrics. Structural positioning within the ecosystem and the distribution of control over critical resources fundamentally shape long-term autonomy and surplus allocation. The conceptual architecture thus links governance design to dependency formation and, ultimately, to asymmetric value capture, providing a coherent explanatory logic for the coexistence of empowerment and structural constraint.

4. Discussion

The Inclusion–Dependency Paradox reframes platform-mediated SME participation as a structurally contingent phenomenon shaped by governance architecture, resource control, and surplus allocation. This perspective generates theoretical implications across platform ecosystem theory, resource dependence logic, value capture scholarship, and emerging research on algorithmic coordination. Rather than positioning SME inclusion as uniformly empowering or inherently exploitative, the analysis identifies the structural conditions under which both outcomes coexist.

4.1 Extending Platform Ecosystem Theory: From Alignment to Distribution

Platform ecosystem research has primarily emphasized alignment and complementarities as drivers of value creation (Adner, 2017; Jacobides et al., 2018). Governance is typically analyzed in terms of openness versus control trade-offs that affect ecosystem growth and innovation (Cennamo, 2021). While this literature acknowledges the importance of value appropriation, the distributional consequences of inclusion for peripheral actors have received less systematic attention.

The present framework extends ecosystem theory by shifting analytical focus from ecosystem expansion to surplus distribution under conditions of asymmetric resource control. Governance design is conceptualized not only as an instrument for aligning complementarities but also as a structural determinant of bargaining asymmetry. This move complements Adner and Kapoor's (2010) insight that ecosystem positioning shapes value realization, but it foregrounds SMEs as analytically central actors rather than residual complementors.

Recent studies highlight that digital ecosystems increasingly rely on algorithmic allocation mechanisms that influence visibility and revenue flows (Kellogg et al., 2020). Yet algorithmic governance is often examined through labor or employment lenses rather than through SME participation dynamics. Integrating these strands clarifies how visibility control functions as a rent-allocation mechanism within ecosystems. Inclusion expands complementarities; governance centralization shapes the allocation of their returns.

The resulting contribution lies in reconceptualizing inclusion as a distribution-sensitive construct. Ecosystem growth metrics alone cannot capture structural power shifts. Distributional asymmetry becomes an essential analytical dimension of platform governance.

4.2 Reframing Resource Dependence in Digitally Mediated Markets

Resource dependence theory explains power as a function of asymmetric control over critical resources (Pfeffer & Salancik, 1978; Emerson, 1962). Traditional applications examine interorganizational relations in supply chains or strategic alliances. Digital platform ecosystems introduce a distinctive configuration: dependence mediated by algorithmic allocation and infrastructural control rather than by contractual exclusivity.

Empirical research on platform-dependent entrepreneurs demonstrates how revenue volatility may arise from unilateral rule changes, ranking adjustments, or fee restructuring (Cutolo & Kenney, 2021). These findings align with the dependence logic advanced here but suggest an additional layer: dependence is operationally embedded. SMEs may not be contractually bound, yet daily performance becomes structurally tethered to orchestrator-controlled systems.

The Inclusion–Dependency Paradox therefore extends resource dependence theory by highlighting infrastructural embeddedness as a mechanism of power reproduction. Dependence emerges not only from scarcity of alternatives but from cumulative operational integration and reputational accumulation. As SMEs accumulate platform-specific assets—reviews, ratings, performance histories—switching costs rise and structural vulnerability deepens. This dynamic resonates with embeddedness research showing that relational stability enhances performance while increasing exposure to systemic risk (Uzzi, 1997).

By integrating algorithmic governance research with classical dependence theory, the framework clarifies how digital intermediation transforms the microfoundations of power asymmetry.

4.3 Advancing Value Creation–Value Capture Scholarship

The separation between value creation and value capture remains central to understanding ecosystem outcomes (Lepak et al., 2007). Prior work recognizes that actors occupying

strategic positions capture disproportionate rents (Adner & Kapoor, 2010; Priem, 2007). However, empirical discussions of digital inclusion frequently conflate increased participation with improved welfare outcomes.

The paradox perspective introduces a structural distinction: inclusion may increase aggregate ecosystem value while simultaneously intensifying capture asymmetry. This duality refines existing ecosystem models by embedding surplus distribution within participation dynamics. SMEs may scale revenues and improve operational efficiency, yet the orchestrator's centralized control over monetization levers may appropriate a growing share of incremental surplus.

Recent research on digital entrepreneurship emphasizes opportunity expansion (Nambisan et al., 2019), yet less attention has been given to surplus retention capacity among smaller firms. The present model clarifies that surplus allocation depends on governance centralization and resource substitutability. Where multi-homing options are limited and algorithmic visibility is opaque, value capture asymmetry is likely to intensify.

This refinement contributes to value capture theory by specifying the structural conditions under which value creation does not translate into proportional value retention for complementors.

4.4 Conceptualizing the Inclusion–Dependency Paradox

The central theoretical contribution lies in articulating the Inclusion–Dependency Paradox as a structural configuration rather than a normative claim. The paradox arises when opportunity expansion and dependency intensification are jointly produced by governance architecture. Empowerment and vulnerability are not opposites but interdependent outcomes shaped by ecosystem design.

Three theoretical advances follow.

First, the framework integrates ecosystem governance and resource dependence into a unified causal architecture. Platform studies often examine control and openness, while dependence theory focuses on resource asymmetry. Bringing these traditions together clarifies how governance centralization transforms opportunity expansion into structural leverage.

Second, the model advances a distribution-sensitive view of digital inclusion. Inclusion is reconceptualized as a multidimensional construct encompassing access, autonomy, and surplus retention. This move addresses a gap in digital economy research, which frequently measures inclusion through participation metrics without evaluating structural positioning.

Third, the paradox perspective introduces non-linearity into analyses of platform participation. The relationship between inclusion and autonomy is curvilinear: initial access increases strategic opportunity, yet high levels of governance centralization and resource concentration may reduce bargaining space. This specification generates testable propositions and opens avenues for empirical validation across varying ecosystem configurations.

4.5 Boundary Conditions and Future Research Directions

The model's implications are contingent upon ecosystem characteristics. High network effects, strong data centralization, and limited multi-homing amplify dependency risks. Conversely, interoperable infrastructures and distributed governance reduce asymmetry. Sectoral variation may also matter; service-based SMEs reliant on algorithmic discovery may face higher dependency exposure than product-based firms with diversified distribution channels.

The matrix below specifies how varying combinations of governance centralization and SME inclusion generate distinct structural outcomes. It clarifies the boundary conditions under

which the Inclusion–Dependency Paradox intensifies or weakens across ecosystem configurations.

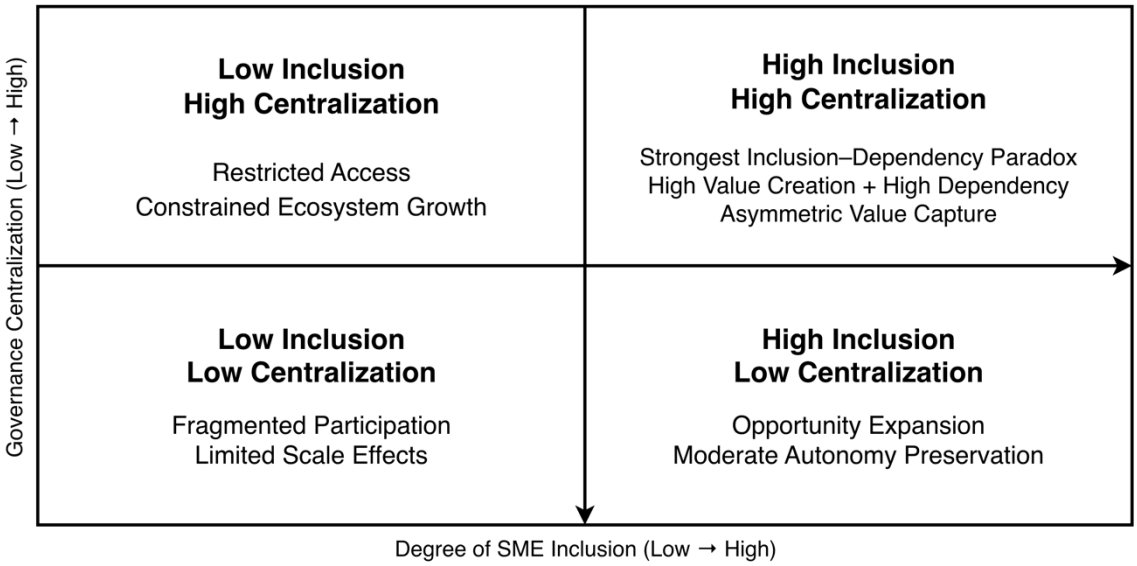

Figure 3. Governance Centralization and SME Inclusion: Configurational Outcomes of the Inclusion–Dependency Paradox
Source: Developed by the authors

Figure 3 specifies the structural boundary conditions of the model by mapping governance centralization against the degree of SME inclusion. The upper-right configuration—high inclusion combined with high centralization—produces the strongest manifestation of the paradox, where expanded value creation coexists with intensified dependency and asymmetric value capture. In contrast, lower centralization moderates dependency risks even under high participation. The matrix clarifies that inclusion outcomes are not uniform but contingent upon governance architecture.

Empirical research could examine variation across ASEAN platform ecosystems, comparing cases with differing governance centralization levels. Longitudinal designs would clarify how dependency evolves as participation deepens. Quantitative analyses could measure surplus distribution patterns relative to governance configurations, while qualitative studies might explore SME perceptions of autonomy and constraint.

The paradox framework invites refinement through multi-level analysis, incorporating firm capabilities and strategic responses. Some SMEs may mitigate dependency through brand development, direct customer engagement, or multi-platform strategies. Exploring heterogeneity among SMEs would extend the model beyond structural determinism.

5. Conclusion

Platform-mediated SME inclusion has become a defining feature of emerging digital economies. Participation in digital ecosystems expands market access, lowers entry barriers, and integrates complementary services that enhance operational efficiency. Yet expanded participation does not automatically translate into sustained autonomy or proportional surplus retention. The analysis developed here demonstrates that inclusion is structurally conditioned by governance architecture, resource control, and ecosystem positioning.

The Inclusion–Dependency Paradox captures this duality. Platform-orchestrated inclusion increases SME value creation capacity while simultaneously intensifying structural dependence on orchestrator-controlled resources such as algorithmic visibility, transactional infrastructure, and data access. As governance centralization deepens, surplus allocation may become increasingly asymmetric, even as aggregate ecosystem value continues to

grow. Empowerment and vulnerability therefore coexist as co-produced outcomes of platform design rather than as mutually exclusive states.

By integrating platform ecosystem theory (Adner, 2017; Jacobides et al., 2018), resource dependence logic (Pfeffer & Salancik, 1978), value creation–value capture distinctions (Lepak et al., 2007), and recent research on algorithmic coordination (Kellogg et al., 2020; Cutolo & Kenney, 2021), this study advances a distribution-sensitive understanding of digital inclusion. Inclusion must be evaluated not only in terms of entry rates or revenue growth, but also in terms of structural positioning and bargaining leverage within the ecosystem.

The theoretical contribution lies in three areas. First, platform governance is reconceptualized as a determinant of surplus distribution, not merely ecosystem alignment. Second, resource dependence is extended to digitally mediated environments where infrastructural control substitutes for contractual exclusivity. Third, inclusion is theorized as a non-linear and structurally contingent phenomenon, opening pathways for empirical research on when and how opportunity expansion transitions into dependency lock-in.

The framework underscores that the future of SME participation in digital economies depends less on access alone and more on governance configurations that shape autonomy and value retention. As platform ecosystems continue to expand across emerging markets, understanding the structural conditions that moderate dependency and redistribute bargaining power becomes central to advancing both theory and practice in digital strategy and ecosystem management.

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