Routledge Studies in Innovation, Organizations and Technology

VALUE CREATION IN DIGITAL PLATFORMS AND BUSINESS ECOSYSTEMS

NETWORKS, RELATIONSHIPS AND THE PLATFORM MARKETS

Edited by
Victoria Slettli and Sabine Baumann

ROUTLEDGE

Part II

Platform Competition and Strategies for Value Creation

6 Digital Platform Strategies for Value Creation and Capture

Strategic Positioning and Competitive Dynamics in Network-Based Markets

Marvin Hanisch and Curtis Goldsby

6.1 Introduction

Digital platforms have gained considerable traction due to their capacity to generate immense value in a short time, connect stakeholders in new ways, and offer radically different business models (Constantinides et al. 2018; Gawer 2021; McIntyre et al. 2021). A distinctive feature of digital platforms is their ability to facilitate transactions between previously unconnected groups (typically, the supply and demand sides) by lowering the barriers and costs of exchange through innovative business models. Some of the most rapidly growing firms in recent decades, such as Amazon, Alibaba, and Google, have managed to leverage the potential of multi-sided markets and have attained valuations exceeding those of non-platform competitors by multiples. However, platforms also present particular challenges for strategy formulation because value creation and capture processes are complicated by the need to consider the platform's distinct sides (Adner and Kapoor 2010; Ceccagnoli et al. 2012).

A key pathway to creating and capturing value, and thus sustaining a competitive advantage, lies in formulating a compelling strategy. Despite extensive discussions on strategy formulation in platform contexts (McIntyre and Srinivasan 2017; Rietveld and Schilling 2021), the literature involves two critical challenges: (1) insufficiently considering the interplay between supply- and demand-side strategies and (2) the conditions under which network effects, which occur when the value of a product or service increases as more people use it, shield platforms from competition. In fact, previous studies have focused predominantly on the strategies of one side (e.g., how to incentivize complementors on the supply side) and platform-internal network dynamics (e.g., platform growth). However, there is a lack of integrative perspectives that consider strategic options across both sides. Moreover, the prevailing assumption that a large installed base—whether in terms of users or complementors—shields platforms from competition contradicts observations of new entrants dethroning established platforms. Therefore, a deeper exploration of the interplay between strategy choices, competitive

DOI: 10.4324/9781003506997-8

responses, and platform dominance is essential for a comprehensive understanding of platform dynamics.

To enhance the understanding of platform strategies for creating and capturing value, we develop a conceptual framework that introduces a typology of generic strategies across platform sides and presents a set of testable propositions. This framework identifies the key trade-off between *diffusion*—rapid expansion to maximize network effects—and *differentiation*, which protects platform sides through unique, hard-to-replicate attributes. We examine how this trade-off influences strategic decisions regarding content ownership and user engagement. On the supply side, platforms must balance exclusive content differentiation with the broader reach achieved through openness. On the demand side, we explore the choice between attracting a large, loosely connected user base and fostering a smaller, more engaged community. Additionally, we propose hybrid strategies that combine elements of both diffusion and differentiation and discuss their adaptability over time. Finally, we explain why these strategic choices influence network effects and platform vulnerability, allowing competitors to execute strategic attacks. We argue that, depending on the strategic orientation of both the incumbent and competing platforms, the outcomes of platform competition may include competitive substitution, separation, absorption, or complementarity.

This chapter extends theories regarding the strategic positioning of platform firms in multiple ways. First, this chapter presents a typology of generic platform strategies and transfers this framework to the multi-sided context of digital platforms. In contrast to previous works studying platform strategies, our framework explicitly considers and delineates the different generic strategies that platform providers can choose in terms of their supply and demand sides. This approach allows us to better map the complexity of strategic decisions in multi-sided markets and make more accurate predictions about the strategy-related performance of platform firms and competitive responses. Second, we stipulate that a central managerial trade-off for digital platforms exists between diffusion and differentiation. In doing so, we extend the related arguments on the strategic trade-offs discussed in prior work, such as those between openness and closure (Eisenmann et al. 2009) or between quantity and quality (Boudreau 2012). Third, we examine the important interplay between an incumbent platform's strategy and the strategy of its competitor. Specifically, we offer new insights into conceivable competitive moves and strategic positioning that explain the competitive substitution and coexistence of rival platforms.

6.2 Strategy Choice: Trade-off between Diffusion and Differentiation

Digital platforms have garnered significant scholarly attention due to their role as intermediaries connecting supply- and demand-side actors (e.g., Uber linking drivers with riders), creating multi-sided markets with strong network

effects (Gawer 2021; McIntyre et al. 2021). These platforms, characterized by low marginal costs and rapid scalability, often lead to "winner-takes-all" scenarios (Shapiro and Varian 1999), as seen in the swift rise and fall of social media platforms such as Facebook and Myspace. To maintain a competitive advantage, platform strategies must navigate a key trade-off between *diffusion*—rapid expansion to leverage network effects—and *differentiation*—offering unique, hard-to-replicate attributes to protect against imitation. On the supply side, platforms balance fostering a wide range of complements with ensuring exclusivity, while on the demand side, they weigh broad user acquisition against cultivating deeper user engagement (Boudreau 2012; Cennamo and Santalo 2013). Our framework builds on these strategic trade-offs, proposing that platforms can adopt hybrid strategies and highlighting the competitive dynamics that emerge from these choices. In the following sections, we explore how this diffusion–differentiation trade-off applies to the supply side (*content strategy*) and the demand side (*user strategy*), followed by an in-depth analysis of how strategic choices play out between competing platforms.

6.2.1 Supply Side: Content Strategy

The appeal of a platform largely hinges on its accessible content (Hagiu and Spulber 2013; Subramanian et al. 2021). Here, content is broadly defined to include not just media (e.g., movies or games) but also services offered on the platform, such as homes listed on Airbnb or rides provided through Uber. Content delivery is critical because it shapes the platform's value proposition and can range from aggregating and ordering existing content to producing proprietary and thus potentially exclusive content. Platform providers must decide their involvement in content creation: Readily available content enables swift diffusion at low cost but invites imitation, whereas exclusive content is costly to procure but shields from replication (Casadesus-Masanell and Zhu 2013). Thus, platforms must balance the benefits and drawbacks of content involvement (Shi et al. 2023). Based on a combination of theoretical insights and empirical observations from a variety of platform contexts, we identified three primary content strategies: *collect*, *curate*, and *create*. These categories emerged as distinct approaches reflecting increasing levels of platform provider involvement, investment, and control over content; they were selected because of their broad applicability across platforms and their ability to represent strategic trade-offs in balancing content diffusion and differentiation.

Collect

In the simplest form, platforms can operate as brokers by gathering content from various sources and consolidating it in a single location (Boudreau and Jeppesen 2015). In this model, the platform provider offers third-party

content without being involved in its creation, acting as an intermediary that reduces transaction costs between buyers and sellers (Baligh and Richartz 1964). For example, Airbnb and Booking.com collect private accommodations but do not own or operate them, which significantly lowers investment needs (Carrasco-Farré et al. 2022). Similarly, eBay offers products through its platform without managing inventory or logistics, unlike traditional retailers. While this strategy allows for easy scalability and rapid diffusion, it limits the platform provider's control over content availability and quality (Ghazawneh and Henfridsson 2013). The model relies heavily on third-party contributions and must convince providers and users through broad acceptance and ease of use; however, this also makes it vulnerable to imitation. For instance, Lyft replicated Uber's ride-hailing service due to the low barriers for drivers and customers to switch platforms. Overall, the collector strategy enables rapid growth but is highly imitable.

Curate

To mitigate the imitation risks of a collector strategy, platforms can offer exclusive content accessible only through their platform (Cennamo and Santalo 2013); this reduces the likelihood of users switching to competitors, as long as they value the exclusivity. Platform providers can incentivize content creators to offer exclusives by sponsoring or subsidizing content production (Dale 2014). By curating exclusive third-party content, platforms compensate content providers for potential lost revenue outside their platform (Landsman and Stremersch 2011; Cennamo et al. 2018). Like the collector strategy, curating does not involve content creation by the platform itself. Instead, platforms act as patrons, supporting content through loans, co-financing, royalties, or advertisements. This allows them to secure exclusive content without building internal expertise. For example, when Apple entered the streaming market with Apple TV+ in 2019, it chose to curate original content by collaborating with established studios and artists rather than producing its own. Curation allowed Apple to avoid the high costs of film production while offering exclusive content to compete with Netflix, Amazon, and Disney.

Create

Although the curator strategy allows platform providers to offer exclusive content, control over the type, quality, and exclusivity of content ultimately lies with the complementors. To increase content control, platform providers can choose to engage in the production of content themselves. By creating their own content, platform providers have significant control over the type, quality, and exclusivity of the content offered (Weeds 2016; Cennamo 2018). In addition, platform providers can associate their brand with the content they provide, which can help them build a recognizable and distinguishable

profile vis-à-vis competitors and users (Hagiu and Spulber 2013). For example, Netflix invests massively in proprietary film studios to produce exclusive Netflix movies and series, and its target is for half of the company's available content to be original and exclusive titles. Similarly, in recent decades, Sony's decision to buy numerous developer studios that produce high-quality exclusive games for the PlayStation console set it apart from its main rival, Microsoft's Xbox, and contributed to PlayStation's high popularity. Microsoft responded to Sony's acquisition spree by purchasing Activision for $68.7 billion, which secured the software company's control over titles such as Call of Duty and Candy Crush.

Controlling the supply side helps platform providers attract and retain users, significantly reducing the risk of imitation from competitors since content creation is both time-consuming and costly. This strategy also allows for premium pricing. However, the need to produce original content incurs significant costs and requires investment in capabilities, compelling providers to raise service prices to recoup expenses. This price increase may deter users and slow the platform's diffusion. For example, Netflix highlights in its annual reports that content production is its highest cost and that the "fixed cost nature of our content commitments may limit our flexibility" (Netflix 2023, p. 12), showcasing the constraints of a differentiation strategy. Additionally, by providing high-quality content, platform providers may compete with or replace third-party offerings (Wen and Zhu 2019). If providers offer substitute content, it could deter third-party creators, leading to a crowding-out effect where they withdraw from the platform (Foerderer et al. 2018; Zhu and Liu 2018). Consequently, platform providers may struggle with a dwindling supply side, further threatening the platform's attractiveness and overall diffusion.

Proposition 1. *A collector strategy compared to a curator strategy, or a curator strategy compared to a creator strategy, allows the platform to diffuse more quickly, but at the expense of a higher risk of imitation by competitors. Conversely, a creator strategy compared to a curator strategy, or a curator strategy compared to a collector strategy, offers a platform a higher degree of differentiation from competitors, but at the expense of slower diffusion.*

6.2.2 Demand Side: User Strategy

Platforms diverge from traditional business models in how providers engage with users (Claussen et al. 2013). Unlike one-time transactions in traditional business models, platform users—defined as individuals or entities that utilize the services offered on the platform—play a vital role in value creation, often forming communities that offer a competitive edge. For example, a loyal gamer community strengthens preference for a platform, shielding it from imitation (Shankar and Bayus 2003). However, the economic literature tends

to overlook the differentiation potential of user interactions (Gawer 2014). Strategically, platforms balance user accumulation with community-building efforts, facing a trade-off: prioritizing user growth lacks differentiation and exposes platforms to imitation, whereas community-building slows diffusion and risks being outpaced by competitors. We delineate three user strategies (*accumulate*, *activate*, and *associate*) and their attributes to illustrate these differences. These analytic categories represent the broad spectrum of how platforms can foster user involvement, from a broad focus on user numbers (*accumulate*) to more intense engagement and usage (*activate*) and deeper user bonds and community formation (*associate*). These strategies reflect distinct yet generalizable approaches in user management, each with unique implications for diffusion and differentiation.

Accumulate

In the simplest form, platform providers can aim to maximize the number of users on their platform. An accumulation strategy focuses on platform diffusion to exploit network effects, which further accelerates diffusion. The underlying logic is that a larger number of users will attract complementors, which in turn increases the platform's attractiveness for users (Shapiro and Varian 1999). Examples of platforms that adopt this strategy are frequently found among streaming services such as Netflix, Spotify, and Audible. These services do not derive any direct benefit from how frequently or intently subscribers use their service (on the contrary, it most likely increases service costs). Instead, the primary focus of these platforms is to attract as many users as possible to become the market leader and thus the de facto standard to which users and complementors are likely to turn. However, this strategy comes at the cost of high imitability because users do not have strong incentives to stay on a platform to which they are primarily bound by indirect network effects. By offering cheaper prices or a broader set of complementary assets, competitors can easily win users.

Activate

An alternative to accumulating a large user base is focusing on user activation, where platforms prioritize the intensity of use to encourage users to spend more time and money on the platform (Claussen et al. 2013). By activating users, platform providers can sell more complementary products and services. While streaming services may not benefit significantly from users streaming more content, activation is crucial for platforms such as food delivery services (e.g., Delivery Hero and Uber Eats), where increased consumption directly enhances value. Even a small number of frequent users can create more value and stronger network effects than a larger group of occasional users. Therefore, an activation strategy prioritizes usage intensity, encouraging frequent engagement through incentives. High platform usage helps users become more familiar with the platform, fostering loyalty and

increasing spending on complementary products (Chakravarty et al. 2014). This not only binds users and complementors to the platform but also raises perceived and actual switching costs, creating additional protection against competitors' imitation. Ultimately, an activation strategy enhances user engagement and solidifies the platform's ecosystem.

Associate

To deepen user engagement, platform providers can focus on associating users with the platform to foster a strong community. A user association strategy emphasizes the intensity of interactions and community building rather than merely increasing the number of users. These communities are valuable assets for providers, ensuring loyalty, engagement, and potentially higher spending per user (Oestreicher-Singer and Zalmanson 2013; Clauss et al. 2019; Ricart et al. 2020). Providers can nurture these communities by facilitating communication, creating forums, and organizing shared activities or offline events, such as conferences (Fang et al. 2021). When users feel emotionally connected to one another, it enhances their identification with the platform, providing a buffer against competition (Ashforth and Mael 1989). This strategy is often found in the context of gaming consoles, where platform providers try to build strong bonds with the gaming community. For instance, Shankar and Bayus (2003) demonstrated that Nintendo's game console surpassed Sega due to its committed fan base, despite having a smaller user base. Thus, the essence of an association strategy lies in fostering user interactions, which leads to stronger platform identification and loyalty.

Building a community usually comes at the expense of slower diffusion, since the development of a community is time-consuming and cost-intensive. For example, Jodel, a German messaging service that functions similarly to Twitter but restricts messaging to the communal vicinity, allows users to share information about local events. Jodel's need to develop active and strong local communities constrains its diffusion because network effects are localized (Stallkamp and Schotter 2021). As a result, Jodel's popularity varies immensely across cities; some cities are extremely active on the platform, whereas the platform is nearly absent in others. Similarly, partnering websites such as Tinder or Parship depend on strong local communities. For users, it is highly unattractive if their next date is hundreds of miles away (compare Zhu et al. 2021). Platforms that need strong communities to function may well require higher investments in community building and, as a result, may face slower diffusion.

Proposition 2. *An accumulation strategy compared to an activation strategy, or an activation strategy compared to an association strategy, allows the platform to diffuse more quickly, but at the expense of a higher risk of imitation by competitors. Conversely, an association strategy compared to an activation strategy, or an activation strategy compared to an accumulation strategy, offers a platform a higher degree of differentiation from competitors, but at the expense of slower diffusion.*

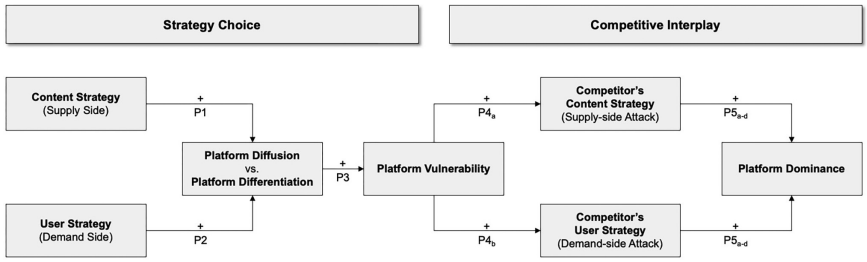


Figure 6.1 Digital Platform Strategies: A Process View

As summarized in Figure 6.1, a platform's strategic positioning involves a trade-off between diffusion and differentiation. Diffusion favors rapid growth and strong indirect network effects by requiring minimal investment in content and users, but it exposes the platform to imitators. Differentiation, on the other hand, results in slower growth owing to the time and resources needed to create content and activate users, but it offers resilience against competitors since unique features are harder to replicate. Neither strategy is strictly superior. For example, eBay has long pursued diffusion, acting as a simple intermediary between buyers and sellers of a wide range of products, without venturing into product development (content strategy) or community building (user strategy). Conversely, platforms such as Grindr and TIDAL have focused on differentiation from the start, targeting niche audiences and offering exclusive features. Platforms can also transition strategies in response to changing competitive dynamics. Netflix, for example, shifted from diffusion to differentiation by producing more exclusive series to retain subscribers. Alternatively, platforms such as Pinterest and Cisco's Fog started with differentiation, initially restricting access to build exclusivity, before later expanding to a broader audience (Khanagha et al. 2022). Such transitions enable platforms to first capture niche markets and then scale as they mature.

6.3 Competitive Interplay between Platforms

Depending on the choice of diffusion- or differentiation-oriented strategies, a platform is exposed to the attacks of competitors to different degrees. In principle, network effects shield a platform from competitors, as platform users and content providers have a strong incentive to tap into the largest possible market, resulting in strong platforms becoming stronger and weak platforms remaining weak or disappearing, a situation known as "winner-takes-all" (Katz and Shapiro 1994; Shapiro and Varian 1999; Schilling 2002). However, this gravitational pull of networks is not homogeneous across platforms but varies depending on the strategies chosen (Panico and Cennamo 2022). While a diffusion strategy can contribute to fast-growing and large networks, they can be replicated or "poached" and thus offer little protection against

competitors, a situation we refer to as platform vulnerability. We illustrate these mechanisms connecting platform strategies, network effects, and platform vulnerabilities in Figure 6.2 and explain them in more detail below.

6.3.1 Strategy Choice and Platform Vulnerability

The extent to which a platform's strategy focuses on diffusion makes it susceptible to the imitation of content and user strategies, which in turn creates vulnerabilities that allow competing platforms to attack a relatively unprotected supply and/or demand side. Owing to the connectivity created by indirect network effects, the imitability of just one network side can engender vulnerabilities for the network as a whole. Generally, platform vulnerabilities emerge when the supply and/or demand sides of the platform are undifferentiated and when competitors have similar access to the same content and/or user base. On the content side, platform vulnerability arises when the platform collects content from third-party complementors, possibly offered on multiple platforms, which provides undifferentiated value. On the user side, platform vulnerability exists when the platform accumulates users that are loosely tied to the platform and hence provide little differentiation to complementors or could switch to competing platforms with ease. The central logic underlying platform vulnerability is that the platform's network may be large and rapidly growing, but the platform provider has little control over network participants. Thus, in pursuing diffusion, a platform faces the

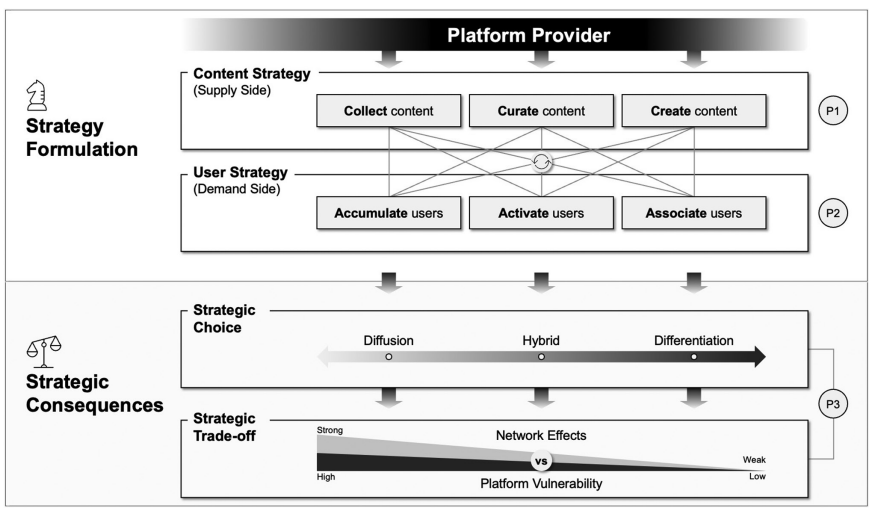


Figure 6.2 Digital Platform Strategies and Associated Trade-offs

imminent threat that part of its network will be captured or compromised by competitors.

Proposition 3. *Diffusion-oriented strategies yield stronger network effects than differentiation-oriented strategies but at the expense of higher platform vulnerabilities. Conversely, differentiation-oriented strategies, compared to diffusion-oriented strategies, reduce platform vulnerabilities but at the expense of weaker network effects.*

6.3.2 Supply- and Demand-Side Attacks

The degree of platform vulnerability created by the strategies chosen by the incumbent gives competitors ample opportunity to attack the supply or demand side of the incumbent. It is reasonable for the competitor to direct an attack primarily on one side of the incumbent platform's network, i.e., to attack either the supply side *or* the demand side, for two reasons. First, concentrating the attack on one side allows the competitor to deliver a heavier blow, since the resources required to do so can be targeted and directed forcefully on one side. Second, competitors can exploit indirect network effects by focusing on one side, since gaining ground on one side of the network usually attracts the other side, triggering a positive feedback loop in which an increase on one side (e.g., the supply side) supports an increase on the other side (e.g., the demand side). Nonetheless, a competing platform may choose to attack the incumbent on both sides simultaneously or sequentially. Figure 6.3 shows the logic sequentially and for each type of attack, by which

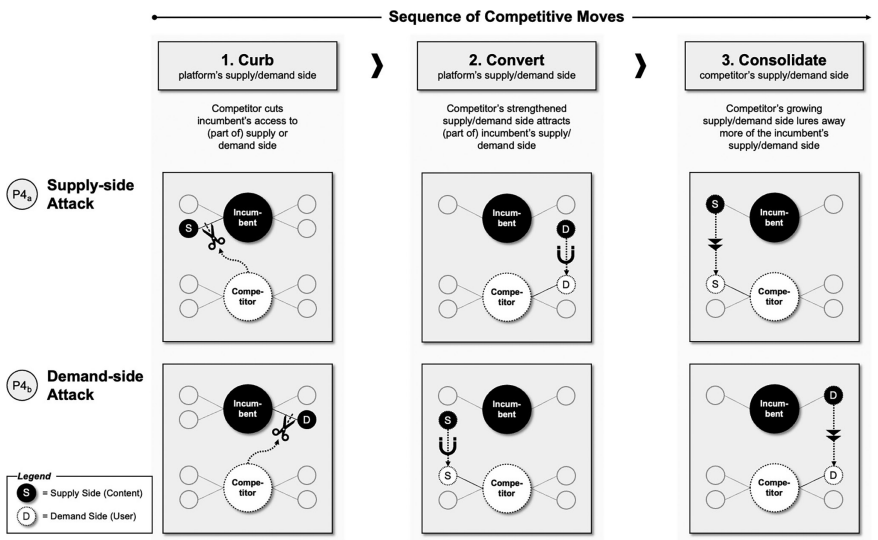


Figure 6.3 Supply- and Demand-Side Attacks on Digital Platforms

the competitor (1) *curbs* and (2) *converts* the incumbent platform's supply/demand side and ultimately (3) *consolidates* the network in its entirety.

Supply-Side Attack

By launching a supply-side attack, competitors can exploit supply-side vulnerabilities in a network. Disney's challenge to Netflix's streaming dominance is a prime example. Through a series of major acquisitions—starting with Pixar in 2006, followed by Marvel in 2009, Lucasfilm in 2012, and 20th Century Studios in 2019—Disney gained extensive control over content. In 2017, Disney ended its exclusive deal with Netflix and launched Disney+ in 2019, leveraging its vast library of proprietary content to compete directly with Netflix, which had relied on third-party studios. Disney+ lured users from Netflix by offering Disney content exclusively on the new platform. By cutting off Netflix's access to key content, Disney forced Netflix to ramp up its in-house production. The attack was highly successful, with Disney+ becoming the fastest-growing streaming platform in 2021, surpassing 100 million subscribers by the second quarter and closing in on Netflix's 200 million subscribers (Stoll 2022). Disney's supply-side attack exemplifies how controlling proprietary content can significantly disrupt an incumbent's position.

From a theoretical perspective, a supply-side attack requires that the incumbent already has an existing network of complementors on the supply side and users on the demand side. In a supply-side attack, the competing platform attempts to replicate or surpass the incumbent platform's supply side by appropriating a portion of the network. More specifically, the focus of a supply-side attack is for the competitor to cut off the incumbent's access to content and thereby (1) *curb* the platform's supply side. A network attack is especially promising when the incumbent's supply side is undifferentiated and thus weakly tied to the platform, and the attacker has the ability to exert strategic control over part of the supply side. Strategic control describes the ability to deny the incumbent platform access to content and prevent the complementors from pursuing a multihoming strategy, so that the attacker gains exclusive rights. If successful, this attack triggers a chain reaction where the incumbent's users shift to the competing platform's stronger supply side. In turn, the higher number of users on the demand side (2) *converts* more complementors on the supply side to the competing platform, which sets a positive feedback loop in motion. The competing platform continues to (3) *consolidate* the network, and this loop continues until the incumbent platform is deprived of its network, decides to adopt a defensive strategy, or launches a counterattack. Therefore, we propose the following:

Proposition 4a. *Platform vulnerabilities on the supply side that result from the incumbent platform's diffusion-oriented content strategy make a successful supply-side attack by a competing platform more likely.*

Demand-Side Attack

A demand-side attack targets weaknesses on the demand side of an incumbent platform's network. Epic Games exemplifies this strategy with its Epic Games Store, challenging the dominant Steam platform. By offering over US $17.5 billion worth of free games, including blockbuster titles such as the Batman and Tomb Raider trilogies (Peters and Hollister 2021), Epic Games attracted a strong base of gamers seeking free content. As users signed up, they were exposed to advertisements and eventually made paid transactions, benefiting the store through commissions. This growing demand side also attracted major game publishers such as Ubisoft, EA, and Rockstar, aiming to boost their game sales. Epic Games' strategy invested in building a loyal user base, enticing them with free, premium content to encourage future transactions. As the demand side grew, the platform became more attractive to publishers, helping Epic Games emerge as a key competitor to Steam. By focusing on users and free premium content, Epic Games attempts to capture a significant portion of Steam's demand side, setting the stage for long-term platform profitability.

Conceptually, the demand-side attack works similarly to the supply-side attack, with the sequence reversed. The demand-side attack focuses on compromising the opponent's weakly coupled demand side. The aim is to associate users exclusively with the entrant's platform and to induce a high level of loyalty among users, which the incumbent platform cannot match with a loosely accumulated user base. Given a successful attack, the competing platform would begin to convert a share of demand-side users from the incumbent platform. In this case, the supply side of the incumbent platform would also start to shift to the supply side of the competing platform. The reason is that the demand side of the competing platform is gaining increasing appeal for the supply side, and the growing supply side lures additional demand-side users to the competing platform. Through this demand-side attack, the incumbent faces a downward spiral, to which it may respond with further demand-side differentiation or a counterattack (e.g., a supply-side attack) to prevent losing its network to the competitor. We therefore propose the following:

Proposition 4b. *Platform vulnerabilities on the demand side that result from the incumbent platform's diffusion-oriented user strategy make a successful demand-side attack by a competing platform more likely.*

6.3.3 Strategic Positioning and Sustained Competitive Advantage

When multiple platforms compete for the same complementors and users and are "exchanging blows" in the form of supply- and demand-side attacks, we expect the relevant network to split across multiple platforms. We also suggest that the fault line varies depending on the strategic orientation of the respective platforms. More specifically, we argue that a constellation in which the incumbent platform and the competing platform focus on diffusion is not sustainable in the long run, while a constellation in which at least

one platform focuses on differentiation can lead to an equilibrium in which the network is divided along stable lines. We then venture to examine situations in which competitors also make efforts to merge networks, thereby enhancing network effects. Below, we expound on the mechanisms underlying competitive substitution, separation, absorption, and complementarity as four conceivable strategic-level outcomes of competitive platform interplay.

After a competing platform has attempted to pull complementors and/or users from the incumbent platform, the compatible complementors and users are dispersed across two or more platforms, which corresponds to a network division across multiple central nodes. In this competitive setting, platforms can engage in fierce competition to dominate the market, separate the network along newly defined fault lines, absorb untapped market segments, or coexist in a complementary fashion. The outcome largely depends on the strategic balance of differentiation and diffusion employed by each platform. As we elaborate on these network-level dynamics, we proceed under the assumption that the network is sufficiently large to permit the entry of multiple platform providers. This assumption could be violated, for example, if the network is geographically concentrated, as is the case with ride-hailing and dating platforms (Zhu et al. 2021), or if the network is still in its early growth phase. In such cases, competitive dynamics are likely confined to single markets (e.g., ride-hailing in New York City) or short-lived, as the network is unable to sustain multiple intermediaries in a profitable manner (Baligh and Richartz 1964). In Figure 6.4, we synthesize our arguments about how a network is likely to be divided depending on the strategy choices of two platforms competing for the same content and users.

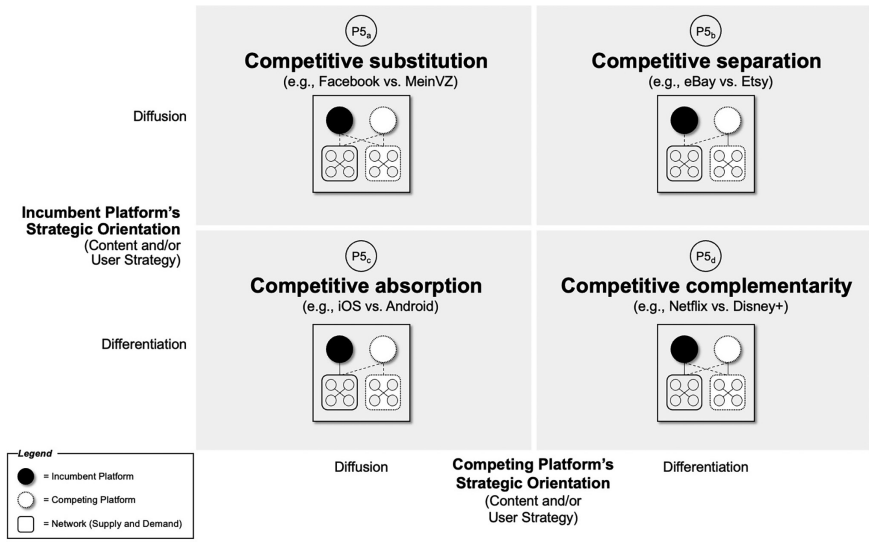


Figure 6.4 Strategic Choices and Competitive Dynamics between Digital Platforms

Competitive Substitution

The rapid diffusion enabled by network effects provides an incumbent platform with a strong competitive advantage, making it difficult for competitors to gain ground. In fact, users and complementors would see little benefit in siding with a smaller market competitor. Moreover, if the competitor tries to replicate the incumbent's diffusion strategy (e.g., based on competitive pricing), the incumbent can easily retaliate by lowering prices for users or by granting a higher profit share to complementors. A likely outcome of two platforms pursuing a diffusion strategy with little differentiation is fierce competition, where each platform tries to substitute the other. An example is the rivalry among various virtual assistants from Google, Amazon, Microsoft, Apple, and Samsung, which connect end users with a range of smart features, often developed by third parties (e.g., through Alexa skills in the case of Amazon). Each assistant offered similar functionalities with varying degrees of technical sophistication; however, all strategies were geared toward diffusion in an attempt to become the dominant platform for virtual assistants.

In the early stages of a network, the tug-of-war between competing platforms leaves complementors and users with a high degree of uncertainty and can lead to slow network growth or even contraction as each side hesitates to commit to a platform. If the competition persists, the network is split along shifting lines, with each platform compromising the growth of the other. If a clear winner eventually emerges from the competitive battle (e.g., Facebook as the winner over Myspace), substitution is tantamount to a "winner-takes-all" outcome in which the dominant platform absorbs both the supply-side and demand-side networks of the competitor (Shapiro and Varian 1999). This scenario does not shield the incumbent platform from the emergence of new entrants that could once again threaten the dominant platform's network (e.g., Snapchat as a new competitor to Facebook after the Myspace era). Hence, we propose:

Proposition 5a. *When the incumbent platform and the competing platform choose a diffusion-focused strategy, the result is fierce platform competition where each platform attempts to substitute the other.*

Competitive Separation

To prevent destructive platform wars with a diffusion-oriented incumbent, the competing platform can adopt a differentiation strategy that evades direct confrontation. Direct clashes between two diffusion strategies can disadvantage the competing platform, struggling against the network effects that bolster the incumbent's position (Chintakananda and McIntyre 2014; Thies et al. 2018). For instance, since 1995, eBay has pursued a diffusion strategy, allowing users of its platform to buy and sell products across a wide range of categories in exchange for transaction fees assumed by the sellers. Rather than competing with this diffusion strategy, the online marketplace Etsy

pursued a differentiated approach by charging $0.20 per listing (rather than charging per transaction) and focusing on high-quality, craft-related, vintage, and handmade items. This differentiation approach allowed Etsy to take $2.671 billion in revenues in 2023 (compared with eBay's $10.11 billion), with 7.5 million active sellers and 95.1 million active buyers worldwide in 2023 (compared with eBay's 132 million active buyers and sellers in 2023).

Competitive Absorption

Alternatively, if the incumbent platform pursues a differentiation strategy, this leaves the door open for the competing platform to deploy a diffusion-focused strategy. This strategy combination can be particularly effective if the incumbent leaves potential users with specific demands uncovered, which its competitors can absorb. For example, when Apple launched its iPhone in 2007, the underlying operating system iOS was tied to its expensive hardware, which was out of reach for many customers who were unwilling to spend a premium price for a phone. This allowed Google to enter the market with a diffusion-focused strategy when it launched Android one year later. While Apple built a closely controlled ecosystem linking its software to its own hardware, Google pursued an aggressive diffusion strategy by developing a platform that was open to third-party device manufacturers.

Regardless of which party opts for a diffusion-focused strategy or a differentiation-focused strategy, diverging strategies are usually compatible in platform markets. At the same time, given that diffusion-driven strategies typically aim at reaching a wide audience with a competitively priced product, while differentiation strategies target a smaller, more demanding segment, the result of diverging strategies is usually competitive coexistence between a dominant player and a subordinate player. Examples from Windows and Mac, Android and iOS, Microsoft Teams and Slack, or Quora and Reddit show that markets can support a large diffusion-focused platform and a small differentiation-focused platform in the long run. Although the platforms are competitors, they do not battle for dominance or major shifts in how the network is divided, but concentrate on serving their respective segments:

Proposition 5b. *When the incumbent platform chooses a diffusion-focused strategy and the competing platform chooses a differentiation-focused strategy, the result is competitive separation, with a dominant player and a subordinate player serving the market.*

Proposition 5c. *Conversely, when the incumbent platform chooses a differentiation-focused strategy and the competing platform chooses a diffusion-focused strategy, the result is competitive absorption, with a dominant player and a subordinate player serving the market.*

Competitive Complementarity

Finally, this leaves a scenario where the incumbent platform and the competing platform choose differentiation-focused strategies. In this situation, both incumbent and competing platforms adopt differentiation-focused strategies, prioritizing non-imitability over diffusion. This leads each platform to cater to distinct market segments, enabling their coexistence without direct competition for the same user group. The network is divided based on user preferences, akin to traditional product markets with limited network effects. For instance, Disney+ and Netflix both offer exclusive content but focus on distinct primary viewer groups (e.g., exclusive family-friendly content and sports in the case of Disney+, exclusive series in the case of Netflix). Similarly, gaming consoles such as Nintendo and Xbox differentiate their offerings, targeting different demographics and building dedicated communities (e.g., children vs. adult gamers). With demand heterogeneity, markets can sustain multiple differentiated platforms where network effects are confined to smaller user groups on the basis of preferences:

Proposition 5d. *When the incumbent platform and the competing platform choose a differentiation-focused strategy, the result is competitive complementarity where each player serves a distinct market.*

6.4 Conclusion and Implications

We have developed a conceptual framework to systematize the strategic choices available to platform firms competing in multi-sided markets characterized by strong network effects (Figure 6.1). Our model is based on the idea that platform providers face a fundamental trade-off between focusing on diffusion or differentiation. While diffusion-focused platforms typically benefit from stronger network effects, they are also more vulnerable to competitor attacks, making hybrid strategies a potential alternative (Figures 6.2 and 6.3). We argue that this trade-off is further influenced by the strategic positioning of rival platforms, with the constellation of strategic positions often determining whether platforms can coexist or substitute for one another (Figure 6.4).

6.4.1 Theoretical Implications

Our framework lays the foundation for formulating digital platform strategies and analyzing performance and competitive implications. Additionally, we offer a refined typology for describing the strategic positioning of platform firms, addressing trade-offs such as openness vs. closure (Eisenmann et al. 2009) and quantity versus quality (Boudreau 2012). Unlike prior research that focused on single platform contexts, our framework allows scholars and practitioners to distinguish digital platforms along a spectrum

of diffusion and differentiation and understand these choices in the context of competitive interplay. This classification helps accurately describe the strategic positioning of platform providers with respect to complementors and users, highlighting hybrid strategies that have received limited scholarly attention despite their practical prevalence. We thus enable more fine-grained analyses of platforms.

With this chapter, we join a more fundamental conversation in the strategy literature on strategic choices and positioning that goes back to the foundational strategy works of Chandler (1962) and Porter (1985). With the emergence of rapidly growing platform firms and ecosystems in recent decades, the competitive landscape has been increasingly defined by the creation of multi-sided markets and network effects (Jacobides et al. 2018; Shipilov and Gawer 2020). Moreover, whereas cost and quality leadership are valid strategies in the industrial world, the digital world enables diffusion at low marginal costs and leads to a homogenization of quality through the rapid copying of best practices and a continuous updating of services (Kim et al. 2004). Similarly, market entry decisions are strongly constrained by network dynamics so that first mover and follower strategies must be evaluated in light of their diffusion and differentiation potential (Lieberman and Montgomery 1988; Özalp and Kretschmer 2019). In the same vein, the classic dichotomy between market and hierarchy (i.e., make or buy decisions) needs to be reconsidered because digital platforms often create their own markets and therefore can control many transactional attributes, such as the level of uncertainty and opportunistic threats (Williamson 1975; Chen et al. 2022). As a result, firms are increasingly expected to design strategies that offer the possibility of creating a sustainable competitive advantage in shifting contexts. The framework developed in this chapter highlights key strategic choices and trade-offs in the context of digital platforms and thereby translates fundamental strategic principles to the digital economy.

6.4.2 Managerial Implications

Our study has important implications for practice. For platform founders, our study underscores the risk of platform vulnerabilities associated with diffusion-oriented strategies. In particular, we warn that new platforms may focus primarily on building a network of complementors and users without paying sufficient attention to the risk of competitive attacks. Such attacks become more likely once a platform has built a large but loosely coupled network that can be easily captured by a supply-side or demand-side attack. We advise that managers leverage the dynamics of diffusion and differentiation over time to counteract these risks, depending on the intensity of platform competition. Our framework is also valuable for platforms operating in mature markets with strong competition, as it shows how differentiation-oriented strategies on the supply and/or demand side can help a platform maintain

a competitive advantage and successfully coexist with other platforms. Our model demonstrates that platforms competing solely on diffusion tend to exhaust one another, which is valuable insight for managers who formulate strategies for new platforms.

6.4.3 Limitations and Future Research

The scope of this chapter, however, does not allow for the illumination of other interesting aspects, thus leaving possibilities for future research. One key area is complementor strategies, especially multihoming, where complementors operate on multiple platforms (Cennamo et al. 2018). Multihoming reduces a platform's ability to differentiate, making the interaction between a platform's content strategy and complementors' presence across platforms particularly intriguing. For example, studies could explore how a platform provider's diffusion–differentiation strategy affects multihoming and the potential entry or exit of complementors. Pricing strategy is another vital topic (Tan et al. 2020): Deciding when and how to monetize users or complementors can be influenced by content differentiation and user loyalty. Understanding these dynamics may provide deeper insights into pricing in multi-sided markets. Additionally, network effects present in platforms may drastically change when such platforms become more decentralized and intermediary-free. This can be the case for blockchain-based platforms (Hanisch et al. 2025), where successful strategies and adoption often hinge on governance decisions (Goldsby and Hanisch 2022). As such, strategies for decentralized blockchain platforms constitute an exciting research area that goes beyond the centralized assumptions covered in this chapter. Finally, cross-platform strategies, such as integrating platforms into hubs or ecosystems (e.g., Amazon Prime or WeChat), introduce strategic challenges, including how diffusion on one platform complements differentiation on another. Investigating these areas could advance the understanding of platform dynamics.

References

Adner, R. and Kapoor, R., 2010. Value Creation in Innovation Ecosystems: How the Structure of Technological Interdependence Affects Firm Performance in New Technology Generations. *Strategic Management Journal*, 31 (3), 306–333.

Ashforth, B.E. and Mael, F., 1989. Social Identity Theory and the Organization. *Academy of Management Review*, 14 (1), 20–39.

Baligh, H.H. and Richartz, L.E., 1964. An Analysis of Vertical Market Structures. *Management Science*, 10 (4), 667–689.

Boudreau, K.J., 2012. Let a Thousand Flowers Bloom? An Early Look at Large Numbers of Software App Developers and Patterns of Innovation. *Organization Science*, 23 (5), 1409–1427.

Boudreau, K.J. and Jeppesen, L.B., 2015. Unpaid Crowd Complementors: The Platform Network Effect Mirage. *Strategic Management Journal*, 36 (12), 1761–1777.

Carrasco-Farré, C., *et al.*, 2022. The Stakeholder Value Proposition of Digital Platforms in an Urban Ecosystem. *Research Policy*, 104488.

Casadesus-Masanell, R. and Zhu, F., 2013. Business Model Innovation and Competitive Imitation: The Case of Sponsor-Based Business Models. *Strategic Management Journal*, 34 (4), 464–482.
Ceccagnoli, M., *et al.*, 2012. Co-Creation of Value in a Platform Ecosystem: The Case of Enterprise Software. *MIS Quarterly*, 36 (1), 263–290.
Cennamo, C., 2018. Building the Value of Next-Generation Platforms: The Paradox of Diminishing Returns. *Journal of Management*, 44 (8), 3038–3069.
Cennamo, C., Özalp, H., and Kretschmer, T., 2018. Platform Architecture and Quality Trade-offs of Multihoming Complements. *Information Systems Research*, 29 (2), 461–478.
Cennamo, C. and Santalo, J., 2013. Platform Competition: Strategic Trade-Offs in Platform Markets. *Strategic Management Journal*, 34 (11), 1331–1350.
Chakravarty, A., Kumar, A., and Grewal, R., 2014. Customer Orientation Structure for Internet-Based Business-to-Business Platform Firms. *Journal of Marketing*, 78 (5), 1–23.
Chandler, A.D., 1962. *Strategy and Structure: Chapters in the History of the Industrial Enterprise*. Cambridge, MA: MIT Press.
Chen, L., *et al.*, 2022. Governance and Design of Digital Platforms: A Review and Future Research Directions on a Meta-Organization. *Journal of Management*, 48 (1), 147–184.
Chintakananda, A. and McIntyre, D.P., 2014. Market Entry in the Presence of Network Effects. *Journal of Management*, 40 (6), 1535–1557.
Clauss, T., Harengel, P., and Hock, M., 2019. The Perception of Value of Platform-Based Business Models in the Sharing Economy: Determining the Drivers of User Loyalty. *Review of Managerial Science*, 13 (3), 605–634.
Claussen, J., Kretschmer, T., and Mayrhofer, P., 2013. The Effects of Rewarding User Engagement: The Case of Facebook Apps. *Information Systems Research*, 24 (1), 186–200.
Constantinides, P., Henfridsson, O., and Parker, G.G., 2018. Introduction—Platforms and Infrastructures in the Digital Age. *Information Systems Research*, 29 (2), 381–400.
Dale, S., 2014. Content Curation: The Future of Relevance. *Business Information Review*, 31 (4), 199–205.
Eisenmann, T.R., Parker, G.G., and Van Alstyne, M.W., 2009. Opening Platforms: How, When, and Why? In: A. Gawer, ed. *Platforms, Markets and Innovation*. Cheltenham, U.K, Northampton, MA: Edward Elgar, 131–162.
Fang, T.P., Wu, A., and Clough, D.R., 2021. Platform Diffusion at Temporary Gatherings: Social Coordination and Ecosystem Emergence. *Strategic Management Journal*, 42 (2), 233–272.
Foerderer, J., *et al.*, 2018. Does Platform Owner's Entry Crowd Out Innovation? Evidence from Google Photos. *Information Systems Research*, 29 (2), 444–460.
Gawer, A., 2014. Bridging Differing Perspectives on Technological Platforms: Toward an Integrative Framework. *Research Policy*, 43 (7), 1239–1249.
Gawer, A., 2021. Digital Platforms' Boundaries: The Interplay of Firm Scope, Platform Sides, and Digital Interfaces. *Long Range Planning*, 54 (5), 1–16.
Ghazawneh, A. and Henfridsson, O., 2013. Balancing Platform Control and External Contribution in Third-Party Development: The Boundary Resources Model. *Information Systems Journal*, 23 (2), 173–192.
Goldsby, C. and Hanisch, M., 2022. The Boon and Bane of Blockchain: Getting the Governance Right. *California Management Review*, 64 (3), 141–168.
Hagiu, A. and Spulber, D., 2013. First-Party Content and Coordination in Two-Sided Markets. *Management Science*, 59 (4), 933–949.
Hanisch, M., *et al.*, 2025. Governing Within Semirigid Limits: Navigating the Centralization–Decentralization Paradox in Blockchain-Based Platforms. *Journal of Operations Management*, 71 (7), 917–938.

Jacobides, M.G., Cennamo, C., and Gawer, A., 2018. Towards a Theory of Ecosystems. *Strategic Management Journal*, 39 (8), 2255–2276.
Katz, M.L. and Shapiro, C., 1994. Systems Competition and Network Effects. *Journal of Economic Perspectives*, 8 (2), 93–115.
Khanagha, S., *et al.*, 2022. Mutualism and the Dynamics of New Platform Creation: A Study of Cisco and Fog Computing. *Strategic Management Journal*, 43 (3), 476–506.
Kim, E., Nam, D.-I., and Stimpert, J.L., 2004. The Applicability of Porter's Generic Strategies in the Digital Age: Assumptions, Conjectures, and Suggestions. *Journal of Management*, 30 (5), 569–589.
Landsman, V. and Stremersch, S., 2011. Multihoming in Two-Sided Markets: An Empirical Inquiry in the Video Game Console Industry. *Journal of Marketing*, 75 (6), 39–54.
Lieberman, M.B. and Montgomery, D.B., 1988. First-Mover Advantages. *Strategic Management Journal*, 9, 41–58.
McIntyre, D.P. and Srinivasan, A., 2017. Networks, Platforms, and Strategy: Emerging Views and Next Steps. *Strategic Management Journal*, 38 (1), 141–160.
McIntyre, D.P., *et al.*, 2021. Multisided Platforms as New Organizational Forms. *Academy of Management Perspectives*, 35 (4), 566–583.
Netflix, 2023. *2023 Annual Report of Netflix, Inc.* [online]. Available from: https://www.sec.gov/ixviewer/ix.html?doc=/Archives/edgar/data/1065280/000106528024000030/nflx-20231231.htm [Accessed 17 Mar 2024].
Oestreicher-Singer, G. and Zalmanson, L., 2013. Content or Community? A Digital Business Strategy for Content Providers in the Social Age. *MIS Quarterly*, 37 (2), 591–616.
Özalp, H. and Kretschmer, T., 2019. Follow the Crowd or Follow the Trailblazer? The Differential Role of Firm Experience in Product Entry Decisions in the US Video Game Industry. *Journal of Management Studies*, 56 (7), 1452–1481.
Panico, C. and Cennamo, C., 2022. User Preferences and Strategic Interactions in Platform Ecosystems. *Strategic Management Journal*, 43 (3), 507–529.
Peters, J. and Hollister, S., 2021. *Three Reasons Why Epic Games Can Give Away $17.5 Billion Worth of Games for Free* [online]. Available from: https://www.theverge.com/2021/4/12/22380895/epic-games-store-afford-give-away-17–5-billion-free-games [Accessed 31 Jan 2022].
Porter, M.E., 1985. *Competitive Advantage: Creating and Sustaining Superior Performance*. New York, NY: Free Press.
Ricart, J.E., *et al.*, 2020. Grassroots Resistance to Digital Platforms and Relational Business Model Design to Overcome It: A Conceptual Framework. *Strategy Science*, 5 (3), 271–291.
Rietveld, J. and Schilling, M.A., 2021. Platform Competition: A Systematic and Interdisciplinary Review of the Literature. *Journal of Management*, 47 (6), 1528–1563.
Schilling, M.A., 2002. Technology Success and Failure in Winner-Take-All Markets: The Impact of Learning Orientation, Timing, and Network Externalities. *Academy of Management Journal*, 45 (2), 387–398.
Shankar, V. and Bayus, B.L., 2003. Network Effects and Competition: An Empirical Analysis of the Home Video Game Industry. *Strategic Management Journal*, 24 (4), 375–384.
Shapiro, C. and Varian, H.R., 1999. *Information Rules: A Strategic Guide to the Network Economy*. Boston, MA: Harvard Business School Press.
Shi, R., *et al.*, 2023. Comparing Platform Owners' Early and Late Entry into Complementary Markets. *MIS Quarterly*, 47 (4), 1727–1744.
Shipilov, A. and Gawer, A., 2020. Integrating Research on Interorganizational Networks and Ecosystems. *Academy of Management Annals*, 14 (1), 92–121.

Stallkamp, M. and Schotter, A.P.J., 2021. Platforms without Borders? The International Strategies of Digital Platform Firms. *Global Strategy Journal*, 11 (1), 58–80.
Stoll, J., 2022. *Number of Disney Plus Subscribers Worldwide from 1st Quarter 2020 to 4th Quarter 2021* [online]. Statista. Available from: https://www.statista.com/statistics/1095372/disney-plus-number-of-subscribers-us/ [Accessed 31 Jan 2022].
Subramanian, H., Mitra, S., and Ransbotham, S., 2021. Capturing Value in Platform Business Models that Rely on User-Generated Content. *Organization Science*, 32 (3), 804–823.
Tan, B., Anderson, E.G., and Parker, G.G., 2020. Platform Pricing and Investment to Drive Third-Party Value Creation in Two-Sided Networks. *Information Systems Research*, 31 (1), 217–239.
Thies, F., Wessel, M., and Benlian, A., 2018. Network Effects on Crowdfunding Platforms: Exploring the Implications of Relaxing Input Control. *Information Systems Journal*, 28 (6), 1239–1262.
Weeds, H., 2016. TV Wars: Exclusive Content and Platform Competition in Pay TV. *The Economic Journal*, 126 (594), 1600–1633.
Wen, W. and Zhu, F., 2019. Threat of Platform-Owner Entry and Complementor Responses: Evidence from the Mobile App Market. *Strategic Management Journal*, 40 (9), 1336–1367.
Williamson, O.E., 1975. *Markets and Hierarchies, Analysis and Antitrust Implications: A Study in the Economics of Internal Organization*. New York, NY: Free Press.
Zhu, F. and Liu, Q., 2018. Competing with Complementors: An Empirical Look at Amazon.com. *Strategic Management Journal*, 39 (10), 2618–2642.
Zhu, F., *et al.*, 2021. Network Interconnectivity and Entry into Platform Markets. *Information Systems Research*, 32 (3), 1009–1024.

Index

Note: Page numbers in *italics* and **bold** indicate figures and tables on the corresponding page.

accumulation strategy 98, 99
activation, user 98–9
adaptive threat landscape 58
advanced persistent threats (APTs) 51, 59–63, 258
affected sectors 61
affective value 4, 220–34; attachment to in-game items 230; conversion into monetary value, steps 230–2
aggregate dimensions 140
AI-centric innovation platforms 78
AI-centric transaction platforms 78
AI-driven data analytics 74
AI platform governance: and managerial implications 83–4
Airbnb 32, 35, 36, 40, 41, 44, 95, 96, 116, 117, 182, 183, 185, 187, 188
AI-related crypto scams 63
Alibaba 11, 32, 40, 93
Altinn 32
Amazon 34–6, 40–4, 106, 114, 116, 118–20, 125; in e-commerce 118–19
American 4, 35, 36, 42, 118, 200, 202, 205, 207
API 78, 225
Apollon 140, 141, **142**, 143, 144, 148, **149**, 150; challenges and limitations 151–2
Apple 10, 11, 17, 18, 32, 35–7, 43, 44, 96, 106, 107
App store 11, 16–18, 43, 44, 224
artificial intelligence (AI) 3, 54, 55, 58–9, 63–5, 73–88, 136, 144, 268; conceptualizations **76**, 76–7; types 77–80, **79**
artisan 258, 259, 261, 262, 264–7, 269–72
artisan FMEs 261, 265; crafting with old wool 268; digital platforms and social value creation 270–1; DIY with household items 266–7; jewelry 266; mats and rugs 269; packaging boxes 269–70; soft toys 265–6; stuffed soft toys 267; tote bags 268
associating users 99–100
augmented reality 170, 288
authenticity 4, 277–8, 281, 284–7
autonomy 200–16

Battisti, S. 80, 82, 83
Bellesia, F. 201, 203, 212
Blablacar 120, 191
bottlenecks 16–17
boundary conditions 128
business customers 171
Business ecosystem 1–4, 9–12, 14, 20, 22, 78, 136, 138, 176, 192, 194
business growth 276–88
business models 3, 33, 36, 37, 40, 42, 43, 77, 78, 80, 82, 138, 161, 220–2, 225, 228, 232, 282; comparing 149–51
business strategy 75, 145, 147, 148, 151, 153, 220, 228, 234, 282, 287
business-to-business (B2B) platforms 11, 80, 82–4, 137; ecosystems 11; mechanisms, business values 80–3; transactions 171
business to consumer (B2C) platforms 11, 80, 81, 83, 161; ecosystems 11; mechanisms, business values 80–3

capabilities 13, 14, 16, 55, 57, 59, 64, 66, 68, 144, 168, 169, 192
case study 3, 4, 135, 138, 140, 278, 280, 283, 284, 286, 287
ChatGPT 64
China 60
co-creation 15
collect content 95–6
competitive absorption 107
competitive advantage 78, 83, 84, 93, 95, 104, 106, 109, 110, 148, 149
competitive complementarity 108
competitive dynamics 93–110, *105*
competitive implications 108
competitive interplay, platforms 100–8
competitive separation 106–7
competitive strategy 93–5, 100, 106–9
competitive substitution 106
complementor 17, 110
complementor strategies 110
construction and crafts (CC) sector 3, 161–77; construction and craftsmen platform 167–9; craftsmen 171; customer 171–2; design/construction coordinator 173–4; digitalization 162–3; financiers 172; institutional regulators 172–3; manufacturers 170; scientific approach 165–7; seller meta-role 170–1; service provider 174–5; value creation in 162–5; wholesalers 170
consumer engagement 276–88
convergence of threats 58
creating content 96–7
creative accumulation 34, 38, 39, 41, 43–5
creative destruction 3, 32–4, 37–9, 41–2, 45
crowdfunding 183
crypto scams 64
curator strategy 96
customer 171–2; engagement 3, 4, 16, 169, 276, 277, 283, 284, 286
cyber attacks 54, 59, 62, 63; generations 54–5; victim countries *61*
cybersecurity 50, 51, 57–8, 64, 66–8
cyber threats: generations 54–5
cyber wars 62
cyber weapons 51, 57–9

data analysis 205
data collection 205
data economy 39, 186, 187, 193
data governance 11, 15, 17, 21, 22, 80, 83
data limitations 207
data network effects 16
data privacy 80
decision makers: implications, managers 127–8
deepfake audio scams 64
demand side, user strategy 97–8
demand-side attacks 102–4
dependency 211
design 21, 138, 165, 171, 173, 201, 203, 204, 210–15, 226, 269, 280, 281
design/construction coordinator 173–4
differentiation 94–102, 104–10
diffusion 94–100
digital business ecosystems (DBEs) 1, 9–22; contemporary challenges 20–2; governance responses 20–2
digital commerce 284, 285, 287, 288
digital ecosystem 1–5, 9–12, 14, 20, 22, 36, 44, 136, 174, 191, 192, 194, 240
digital gig economy 200–1, 213, 215
digital gig workers 201, 214
digital identity 4, 19, 200–3, 215, 261
digital market 1, 3–5, 39, 40, 109, 134, 135, 221, 222, 258, 260, 270, 271
Digital Markets Act 21
digital platform 1–4, 32, 39, 136, 148, 175, 202–4, 240, 253, 254, 259, 261, 270–2
digital platform companies (DPCs) 3, 32–46; as new organizational model and phenomenon 34–6; and Schumpeterian typology **38**
digital platform ecosystems 1, 2, 4, 9–11, 14, 36, 40, 44, 74, 136, 162, 165, 167, 174, 175, 239–41, 254
digital platform regulation 148
digital platforms 18, 258–72; intermediation and value creation shift 161–77; worker's self-understanding in 203–4
digital platform strategies 93–110, *100*, 101, 103, 105, 107–9, 146, 148; and associated trade-offs *101*
digital technologies 50, 51, 74–6, 163, 181–94
digital threat 3
digital tool 3, 9, 39, 56, 68, 83, 269–71, 286, 287
digital transformation 1, 3, 33, 37, 50, 80, 83, 175, 277, 285, 287
direct network effects 16
disintermediation 163–5, 167
Disney 96, 103, 108

distinctive ecosystem characteristics 14
distinctive positioning logic 117
"do-it-yourself" (DIY) advice 169, 176
doxxing 65

eBay 34, 73, 96, 100, 106, 107, 161
e-commerce 114, 115, 118–20, 124–6, 128, 129, 135, 138, 141, 143, 144, 148, 151, 161, 282
economic change 36–9; modes, perspectives **38**; through creative accumulation 43–4; through creative destruction 41–2; understanding, Schumpeterian lenses 39–41
economic factors 66
economic value 18
economies of scale 15, 143, 146
economies of scope 43
ecosystems 4, 10–13, 21, 22, 36, 44, 77, 78, 82, 163, 165, 167, 169, 176, 177, 240, 241, 253; dimensions, value 18; environmental and societal value 19; interactions 12–13; orchestrators 11; relational value 19–20; social and public value 18–19
energy ecosystems 19
entrepreneurship 4, 5, 33, 34, 37, 258–62, 264–6, 271, 272
European Union's Data Governance Act 21
exploratory ecosystems 17
extant theory, limits 120–1

Facebook 35, 36, 39–42, 44, 45, 106, 265–8, 270, 271
female 258–62, 265–7, 269, 271, 272
female migrant entrepreneurs (FMEs) 258–72
female migrant entrepreneurship: connectedness 259–60; digital platforms supporting 260–1
financiers 172
Finland 259, 262, 264–9, 271, 272
Finland, entrepreneurs 262; data analysis *264*, 264–5; data collection 262–4; research context 262
first-order coding 139
flexible legal framework 213

gaming platform business models 232–4
gaming platforms 4, 220–34; historical trajectory of 223; types of 224–5
gatekeeper 33
Generative Adversarial Network (GAN) 65
generative AI 58, 63–4, 74
generative mechanisms 4, 181–94
German e-commerce industry 125–6; local installed base, dependence 125–6; regulatory heterogeneity 125
German ride-hailing industry 124–5; local installed base, dependence 124–5; regulatory heterogeneity 124
Germany 57, 60, 114–15, 118–20, 122, 124–6, 129, 162, 165; e-commerce in 119–20, 124–6; ride-hailing in 120, 124–6
gig economies 146, 147, 152–3, 200, 202, 203, 205–8, 212–15
gig work 150, 151, 200–5, 207, 208, 210, 211, 213–15; historical context of 202
gig workers: legal classification of 202–3
Gioia method 264
global installed bases 121–3
global legal frameworks 215
global marketplaces: implications, research 127
global rivals 114–30
Google 17, 18, 32, 40, 41, 43–5, 106, 107, 222–4, 260, 261
governance 2, 5, 11, 17–22, 80, 83, 84, 200–16; mechanism 3, 11, 17, 22, 204

hierarchy 53
holistic defense mechanisms 58
human encounter 4, 239–54
hybrid platform 44, 73, 95, 109, 147, 167, 223–5, 242

identity checks 65
illicit markets 64
impulse buying 277, 278
indirect network effects 16
industry structures 115–18, 121, 129
information ecosystems 50–68
innovation 2, 13, 16–18, 20, 33, 34, 36–40, 45, 68, 177, 280–5; platforms 35, 44, 73, 78, 128, 220–2, 224, 225; understanding, Schumpeterian lenses 39–41
installed base 117, 123
institutional regulators 172–3
integrity 53
inter-human relations 242, 253, 254
international business scholarship 120–1

International Institute for Strategic Studies (IISS) 57
Internet of Things (IoT) 63, 65, 67, 68
interviews 139, 141, 206, 207, 209–11, 244, 262, 280
Iran 60

jailbreak-as-a-service 65

Kirznerian entrepreneurship 33

labor 32, 40, 135, 136, 170, 212, 242; markets 147, 186; models 21
large language models (LLMs) 64
learning 73, 77, 253, 270
legal frameworks 200–2, 214
Lehdonvirta, V. 226–7
live streaming commerce (LSC) 4, 276–88; consumer engagement and impulse buying in 278–9; Room 101, case 280–5; unscripted appeal of 278
local installed bases 115, 121–9
local marketplaces, competition 114–30; framework 121; local installed base 122–3; regulatory heterogeneity 121–2
lock-in effects 16
loyalty 211

Maccarini, A. M. 242, 245, 251–3
machine learning (ML) 55, 58–9
managerial implications 109–10
market manipulation schemes 63
marketplaces 56, 57, 114, 116–18, 120, 122, 123, 125, 127–9
market power 33, 43
media ecosystems 15
Meta 32, 36, 42, 43, 73, 259
Microsoft 32, 35, 36, 43, 44, 97, 106, 223
microtransactions 226
migrant entrepreneurship 258
migrants 259, 260, 265, 272
mixed-method exploration 200–16
mixed-methods approach 204–5
modern capitalism 41
modern cyber threat landscape 63–5
monetary tokens 232
monetary value 4, 220–34
monopoly money 220–34
multi-sided platforms 35, 244

National Labor Relations Act (NLRA) 200
national security 62
Netflix 9, 12, 16, 36, 41, 96–8, 100, 103, 108
network-based markets 93–110
network effects 13, 15, 98, 99, 101, 102, 106, 108–10, 134, 136, 137
Norway 36, 242, 245, 248
Nyby platform 4, 240, 242, 243–4; analysis 251–3; data analysis 244–5; data collection 244; organizing, new forms 245–8; platform use, practices 250–1; social life, spheres 248–50

on-demand grocery platforms 3, 134–53; data analysis 139–40; data collection 139; empirical setting 138; research design 138
on-demand workers 201, 205, 207, 209–14
open APIs 17, 21
orchestration 11–14, 162, 176
orchestrators 10, 12, 13, 15, 20–2
organizational forms 32, 33
organizing, new forms: Nyby's services 245–8

participant demographics 205
PayPal 36
persistence 280–3
phishing 64
platform-based marketplaces 1
platform business models 221–3; virtual and real economies, intersection 225
platform competition 3, 106, 109, 114–18, 120, 121, 126, 127, 129; implications, research 126–7
platform design: implications 213; and worker satisfaction 214
platform economy 239
platform ecosystems 84, 239–41, 250, 253
platform governance 83, 84, 200, 201, 214, 216
platform-mediated labor, navigating 200–16
platform roles 12–13
platform vulnerability 101–2
platform work 150, 208, 215; expectations 208–10
player-driven economies 220–34
Polanyi, K. 212
policy: implications 213
Porter, M.E. 10, 14, 109
post-human sociality 239, 242, 245, 254
Prahalad, C. K. 287

prices 97, 169, 173, 186, 201, 208, 227, 228, 231, 233
private households 171
profit-oriented corporations 33

qualitative data analysis 206
qualitative data collection 206
qualitative methodology 279
quantitative analysis 206–7
quantum computing threats 58–9
Quinones, M. 279, 284, 285

ransomware programs 57
regular money 220–34
reputation systems 21
resilient social networks 4
restrictive legal frameworks 215
retail 57, 165, 223–5, 276, 284
retail, revolutionizing 276–88
retail business 284, 288
ride-hailing 118–20
risks 5, 14, 15, 56, 63, 64, 66, 67, 97, 98, 109
Room 101, case 280–5; practical implications 287–8; results and study limitations 288; theoretical implications 287
Russia 60

sampling strategy 205
scalability 18, 96, 134, 136, 140, 150
Schumpeter, J.A. 34, 36, 37, 42, 45; technology, innovation, and economic change 36–9
Schumpeterian entrepreneurship 33
Schumpeterian perspective 32–46
Scopus 75
second-order theming 140
self-reinforcing cycle 16
semi-systematic scoping technique 74
service-dominant logic 14
service provider 174–5
shadow digital economy (SDE) 50–68; definitions and origins 51–5; impact on value chain 66–7; operating environments for 56–7; tools and approaches 56–63
sharing economy 181–94; access to third-party resources 184–6; bidirectional feedback 187–8; generative mechanism and stakeholders 189–91, **190**; generative mechanisms, value creation 182–4; reduced transaction costs 186–7
small and medium enterprises (SMEs) 82
small businesses 163, 261, 268, 277, 279, 282, 284–7
social integration 271
social life, spheres 248–50
social networks 4, 67, 223, 260
social platform ecosystems 4, 240
social platform value 239–54
social value 239–43, 251–4, 259, 264
social value creation 239–54, 258–72
software ecosystems 16
spending flows, generalized list 67
Spotify 9, 12, 16, 36, 41, 43, 98, 239
stable legal frameworks 135
stakeholders' views 140–1
standardization 175, 215
Steam terms of service 232
Stimulus-Organism-Response (S–O-R) model 279
strategic choices 101–2, *105*
strategic positioning 93–110, 141
strategic vulnerability management 58
streaming services 16
supply side, content strategy 95
supply-side attack 102–3
surveillance 65
survey instrument development 205–6
sustainability 21, 134, 135, 138, 139, 141, 145, 146, 148, 151, 153, 259, 266, 267, 269; in platform-based business models 137
sustainability initiatives 145; environmental sustainability efforts 145–6; regulatory adaptation strategies 147–8; social sustainability and workforce challenges 146–7
sustained competitive advantage 104–8
Sweden 282, 283
switching costs 16, 99
symbolic monetary value: conversion into currency 231–2

tactics, techniques, and procedures (TTPs) 62, 63
technological integration 3, 13
technology 36–9
Telegram 65
theoretical gaps 137–8
threat groups 60
TikTok 13
trade-off 94–100
transaction costs 17, 18, 96, 163, 175, 186, 192

transaction platforms 44, 73, 114, 116–18, 134–7, 145–7, 152, 153; in emerging markets 135–6; policy and practice, implications 153; sustainability and value creation of 134–53; theory, implications 152–3
trust 13–15, 17–19, 83, 84, 186, 188, 189, 249–52
Turkey 3, 134, 138, 147
Twitter 35, 36, 42, 99
two-sided markets 214

Uber 32, 33, 35, 36, 40–2, 114, 116–20, 124, 211; in ride-hailing 119
universality 53
Upwork 42, 200–2, 204, 205, 208–10
user activation 98–9

value capture 14, 93–110
value chains 3, 4, 10–12, 14, 51, 66, 67, 84, 137, 164, 167
value co-creation 4, 73, 163, 168, 175, 176, 277, 287
value creation 2, 10, 12–16, 20, 73, 75, 78, 80, 93–110, 134, 162, 165, 175, 182, 184, 191, 193; age of AI 73–88; data-driven decision-making 144–5; defining, ecosystems 14; in digital platforms 136–7; digital technologies and generative mechanisms 181–94; integrated logistics and platform synergies 143–4; intermediation in 163–5, *164*; mechanisms of 15–18; operational efficiency 143; in platform-centered ecosystems 167–75; as relational process 14–15; strategies 4, 140, 143, 149, 220, 234; technological innovation 144–5; *see also individual entries*
value distribution 14
value networks 2, 14, 165
value propositions 2, 75, 77, 123, 163, 165, 167, 239
Verizon Data Breach Investigations Report (DBIR) 58; key takeaways from 58
virtual economies 220, 225–8, 230–4; and Wider Internet, intersection 228–30
virtual game economies **227**; microtransactions driver 226–7; value exchanged in 227–8
virtual game items: and monetary value, association 230–1
virtual items control 232

web 75, 221
Web of Science (WOS) 75
winner-take-most 114
winner-takes-all logic 100, 117
worker expectations 208
worker experiences 208
worker identity 200–16
worker–platform relationship 211–12
worker satisfaction: platform design and 210–11, 214
worker's self-understanding: in digital platforms 203–4; platform design and 204

YouTube 13, 35, 266, 269, 270, 278

Zeus 140, 141, **142**, 143, 144, 148, **149**, 150; challenges and limitations 151–2