

Article

From Emergence to Establishment: Governance, Monetization, and the Evolution of Digital Business Models

Andrea Tracogna ^{1,2}  and Yusaf Akbar ^{3,*} ¹ DEAMS, University of Trieste, 34127 Trieste, Italy; andrea.tracogna@deams.units.it² MIB Trieste School of Management, 34142 Trieste, Italy³ Department of Economics, Central European University, 1100 Vienna, Austria

* Correspondence: akbary@ceu.edu

Abstract

Digital business models often emerge rapidly and attract users, yet only some become durable over time. This paper develops the concept of business model establishment to capture the process through which a digital business model becomes organizationally robust, transactionally governable, and economically viable beyond initial growth. Combining the business model literature with Transaction Cost Economics, the paper argues that establishment depends on the co-evolution of governance and monetization. Governance matters because scaling increases the need for measurement, adaptation, and safeguarding mechanisms. Monetization matters because these mechanisms require sustained investment supported by stable, diversified, and economically adequate value capture. The paper applies this framework to fintech, a domain in which digital business models face particular demands around transaction frequency, uncertainty, regulation, and trust. Through qualitative case analysis of Revolut, Klarna, Robinhood, and N26, it illustrates four configurations of establishment defined by varying levels of governance and monetization maturity, contributing to the business model literature by distinguishing establishment from innovation, adaptation, and scaling.

Keywords: digital business models; business model establishment; transaction cost economics; governance; monetization

1. Introduction

The digital economy has produced a host of business models that are novel, technologically fluid, potentially scalable, and often dependent on network effects (Amit & Zott, 2001; Yoo et al., 2010; Parker & Van Alstyne, 2005; Parker et al., 2016). Yet, the capacity of a digital business model to attract early users, generate transaction volume, or demonstrate technological promise does not guarantee long-term sustainability. Some digital ventures achieve visibility without achieving viability; others expand rapidly but remain organizationally fragile, commercially precarious, or structurally exposed to the governance demands generated by their own growth. This gap between emergence and establishment, between early adoption and durable economic viability, constitutes one of the most consequential and still under-theorized problems in digital business model research (Foss & Saebi, 2017; Massa et al., 2017; Trischler & Li-Ying, 2023; Kohtamäki et al., 2024).

The business model literature provides the principal vocabulary for analyzing such phenomena. Early contributions established the concept's foundational logic. Magretta (2002) framed business models as accounts of how enterprises work, while



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Chesbrough and Rosenbloom (2002) treated the business model as the logic connecting technological potential with economic value. Amit and Zott (2001) conceptualized value creation in e-business through the design of transactions. Zott and Amit (2010) later formalized this thinking by treating business model design as an activity system. Teece (2010) synthesized these threads by describing the business model as the architecture of value creation, delivery, and capture. These contributions remain foundational. However, the literature remains more developed in explaining how business models are designed, innovated, adapted, or scaled than in explaining how they become established as durable organizational arrangements (Chesbrough, 2010).

This limitation becomes clearer when neighboring constructs are considered. Business model innovation concerns novelty and change in the design of value creation, delivery, and capture (Foss & Saebi, 2017). Business model evolution concerns the dynamic consistency of interacting business model components over time (Demil & Lecocq, 2010). Business model adaptation concerns the response to opportunities and threats in the environment (Saebi et al., 2017). Business model growth and scaling concern expansion beyond initial validation (Achtenhagen et al., 2013; Cavallo et al., 2024). Each of these constructs captures an important dimension of business model change. None, however, directly isolates the transition from early emergence to durable viability as a distinct analytical phenomenon.

This issue is especially consequential in digital contexts. Digital ventures operate under conditions that distinguish them from more settled organizational forms. Their novelty means that fewer established templates exist to guide strategic choices. Technological dynamism compounds this challenge, as design decisions that appear sound at one moment can become misaligned with market, regulatory, or platform conditions with unexpected speed (Yoo et al., 2010; Nambisan, 2017). These pressures are intensified by the economies of scale and network effects, where viability often depends on reaching critical thresholds of user adoption or transaction volume before resources are exhausted (Parker et al., 2016). Network effects can accelerate growth, but they can also amplify weaknesses in governance or monetization when scale arrives faster than organizational capabilities develop. Early growth, therefore, may reveal the promise of a digital business model, but it may also expose its fragility.

This paper addresses that research gap by developing the notion of business model establishment as a specific theoretical construct. Business model establishment is defined here as the process through which a business model becomes organizationally robust, transactionally governable, and economically viable beyond its initial phase of innovation, adoption, or early growth. The paper argues that establishment depends on the co-evolution of two dimensions: governance and monetization. Governance comprises the processes through which a digital business model organizes, monitors, adapts, and safeguards the transactions on which it relies. Monetization refers to the business model's capacity to capture stable, diversified, and economically adequate value, so that it can finance continued operations and the governance infrastructure that scaling requires. Neither dimension is sufficient in isolation. Governance without monetization produces organizationally developed but economically constrained models. Monetization without governance produces commercially extended but structurally fragile ones. Business model establishment requires alignment between the two.

The theoretical foundation of the paper combines Transaction Cost Economics (TCE) with the business model literature. TCE, as developed by Coase (1937) and Williamson (1979, 1985), provides the analytical logic for understanding why governance becomes progressively necessary as digital business models scale. As transaction frequency increases, uncertainty intensifies, and participants commit more substantial dedicated investments, the costs of organizing exchange grow. Consequently, the need for structured governance

mechanisms becomes more important. The business model literature, in turn, provides the broader conceptual architecture through which governance and monetization can be understood as co-constitutive dimensions of value creation, delivery, and capture (Amit & Zott, 2001; Zott & Amit, 2010; Teece, 2010). Combining these perspectives allows the paper to explain not only what establishment is, but why it is difficult to achieve and how its dimensions interact.

Building on Rindfleisch and Heide's (1997) transaction cost analysis, the paper conceptualizes governance through three interrelated mechanisms: measurement, adaptation, and safeguarding. Measurement mechanisms reduce uncertainty by making transactions observable and comparable. Adaptation mechanisms reduce uncertainty by enabling adjustments to changing conditions and contingencies. Safeguarding mechanisms protect participants and the integrity of the system when dedicated investments are at stake. Akbar and Tracogna (2024) applied this logic to sharing platforms, showing how such mechanisms support the transition from weakly governed peer-to-peer exchange toward more integrated platform arrangements. This paper generalizes the same logic to digital business models more broadly.

Monetization, in parallel, concerns the ways through which digital business models capture economic value and the degree to which these forms are stable, diversified, and economically sufficient relative to the governance requirements of scale. It may include commission fees, subscription models, advertising, data monetization, interchange, interest income, spreads, premium services, and ecosystem-based revenue sharing. The central issue is not only whether revenues exist, but whether they can sustain the organizational and governance infrastructure required for the business model to endure.

The paper anchors its theoretical argument in the empirical context of financial technology, commonly referred to as fintech. Fintech refers to the application of digital technologies to the design, delivery, and reconfiguration of financial services (Arner et al., 2015; Gomber et al., 2017). It is an appropriate setting for three reasons. First, fintech business models are digital business models as they rely on scalable digital infrastructures, platform-based interfaces, data-intensive processes, low-friction customer acquisition, and network effects. Second, fintech transactions are intrinsically trust-sensitive, can be financially consequential, and are heavily regulated. Governance requirements span identity verification, anti-money-laundering controls, consumer protection, credit-risk management, fraud detection, and regulatory compliance. This makes the costs of weak governance unusually visible. Third, fintech exhibits the monetization tensions that the framework highlights. The sector has been characterized by low-cost or subsidized customer acquisition, persistent tensions between adoption and profitability, and ongoing debates about the economic sustainability of digitally disrupted financial intermediation (Philippon, 2016; Thakor, 2020).

The paper makes four contributions to the literature. First, it introduces business model establishment as a distinct construct within business model research. While previous studies have examined business model innovation, adaptation, evolution, and scaling (Amit & Zott, 2001; Demil & Lecocq, 2010; Teece, 2010; Foss & Saebi, 2017; Saebi et al., 2017; Cavallo et al., 2024), less attention has been devoted to understanding how business models become durable organizational arrangements capable of sustaining increasingly complex exchanges over time. The concept of business model establishment addresses this gap by focusing on the transition from emergence to organizational robustness, transactional governability, and economic viability.

Second, the paper contributes to the ongoing effort to achieve greater construct clarity and stronger theorization of business model dynamics and outcomes (Foss & Saebi, 2017; Massa et al., 2017; Trischler & Li-Ying, 2023; Kohtamäki et al., 2024). By theorizing the

conditions under which digital business models become established, the paper offers a conceptual infrastructure for future empirical research on digital business model trajectories and developmental paths.

Third, the paper integrates TCE and business model research. Building on Coase (1937), Williamson (1979, 1985), Rindfleisch and Heide (1997), and more recent work on platform governance (Akbar & Tracogna, 2018, 2024), it develops a governance–monetization framework that explains how governance and monetization co-evolve in the process of business model establishment. The framework further identifies four configurations of business model establishment, representing alternative positions and trajectories within the establishment process. Fourth, the paper contributes to managerial practice by highlighting the importance of balancing governance capabilities and monetization mechanisms during growth and scaling processes. The framework provides entrepreneurs and managers with a lens through which to assess the maturity of digital business models and identify areas requiring further development.

While the preceding discussion introduces the concept of business model establishment and proposes governance and monetization as its core dimensions, important questions remain regarding how these dimensions interact and how they explain differences among digital business models. To address these issues, the paper is guided by the following research questions:

RQ1: *How do governance and monetization co-evolve in the process through which digital business models become established?*

RQ2: *How can different configurations of governance and monetization explain variation in business model establishment among fintech firms?*

These questions are exploratory and theory-building in nature. Rather than testing predetermined hypotheses, the objective is to develop and refine a conceptual explanation of business model establishment and to illustrate its empirical relevance through fintech cases.

To address these research questions, the study adopts a qualitative multiple-case design. This methodological choice is appropriate because business model establishment is introduced here as a novel construct that has not yet been operationalized or systematically investigated empirically. Consistent with Eisenhardt (1989), Eisenhardt and Graebner (2007), and Yin (2018), qualitative case studies are particularly suitable when theory development, conceptual refinement, and analytical generalization, rather than hypothesis testing, constitute the primary research objective. The purpose of the empirical analysis is therefore not to establish statistical regularities but to examine how governance and monetization interact in practice and to illustrate different pathways toward business model establishment. Accordingly, the four fintech firms examined in the study, Revolut, Klarna, Robinhood, and N26, were selected through theoretical sampling because they represent different governance–monetization configurations and therefore provide analytically informative illustrations of the proposed framework. The aim is therefore not to provide exhaustive empirical coverage of the fintech sector, but to use analytically relevant cases to demonstrate how the co-evolution of governance and monetization unfolds in practice. The cases are based on secondary data sources, including company reports, regulatory filings, and market analyses, which are appropriate for studying organizations operating in highly visible and data-rich digital industries (Yin, 2018).

The paper is organized as follows. Section 2 develops the theoretical background by clarifying the relationship between business models, digital business models, business model establishment, and the governance problem under a TCE perspective. Section 3 develops the governance and monetization framework and introduces the typological matrix through which different establishment configurations are distinguished. Section 4 turns to fintech as an empirical domain and explains why financial technology represents a particu-

larly suitable context for examining business model establishment. Section 5 presents the methodology and case selection. Section 6 applies the governance–monetization framework to the selected fintech cases. Section 7 discusses the theoretical and managerial implications of the findings and identifies avenues for future research, while Section 8 concludes.

2. Theoretical Background

2.1. Business Models and Digital Business Models

Business model research has long concentrated on innovation, design, and value architecture (Zott et al., 2011; Massa et al., 2017). In broad terms, a business model is commonly understood as the architecture through which value is created, delivered, and captured, often across organizational boundaries and through interdependent activities (Teece, 2010; Massa et al., 2017). Amit and Zott (2001) emphasize value creation in e-business through the design of transaction content, structure, and governance. Chesbrough and Rosenbloom (2002) treat the business model as the logic that converts technological potential into economic value. Zott and Amit (2010) conceptualize business model design as an activity system. Teece (2010) frames the business model as the design or architecture of value creation, delivery, and capture mechanisms. These contributions establish the business model as a central unit of analysis for understanding how firms organize value creation and value capture.

Digital business models build on this general logic but introduce additional features that make the problem of establishment especially salient. A digital business model can be understood as the architecture through which a digitally enabled organization creates, delivers, and captures value, where digital technologies are not merely operational tools but constitutive elements of the value logic itself (Bharadwaj et al., 2013; Vial, 2019; Verhoef et al., 2021). Digital technologies allow firms to scale interactions, personalize services, collect and process data, connect multiple sides of a market, automate coordination, and redesign the boundaries between firms, users, and ecosystems (Bharadwaj et al., 2013; Nambisan et al., 2017; Vial, 2019; Verhoef et al., 2021; Amit & Zott, 2001; Yoo et al., 2010; Nambisan, 2017; Kohtamäki et al., 2024). Consequently, digital business models are not simply digitized versions of traditional commercial arrangements; they are distinctive organizational forms whose viability depends on whether digital capabilities can be translated into durable value architectures (Amit & Zott, 2001; Teece, 2010; Baden-Fuller & Haefliger, 2013; Täuscher & Laudien, 2018).

These characteristics make digital business models particularly dynamic organizational arrangements. Their ability to generate rapid growth and scale has attracted substantial scholarly attention. However, growth and scalability do not necessarily imply durability. This observation raises the question of how digital business models move beyond emergence and expansion to become established organizational arrangements.

2.2. Business Model Establishment

This distinction matters because digital business models often evolve under conditions of rapid adoption, technological dynamism, and scale-sensitive competition. In such settings, the apparent success of a business model may be misleading: a digital venture can attract users and generate transactions before it has developed the organizational routines, governance mechanisms, or revenue streams required for durable operation. Yet, our central analytical issue is not whether a business model is innovative or scalable in principle, but whether it acquires the conditions that make it robust, governable, and economically viable over time.

Business model establishment is introduced to capture this transition. In this paper, we define it as the process through which a business model acquires organizational robustness,

transactional governability, and economic viability beyond initial emergence or growth. Organizational robustness refers to the ability of the business model to support repeated activity without recurrent breakdown in routines, roles, and coordination. Transactional governability refers to the ability to administer, monitor, adapt, and safeguard the exchanges on which the model rests. Economic viability refers to the ability to capture sufficient value to finance the organizational and governance supports required by continuity and growth.

This construct differs systematically from adjacent concepts. Business model innovation concerns novelty and nontrivial change in the design of value creation, delivery, and capture (Foss & Saebi, 2017). Business model evolution concerns the dynamic consistency of interacting business model components over time (Demil & Lecocq, 2010). Business model adaptation concerns responses to opportunities and threats in the environment (Saebi et al., 2017). Growth concerns rising activity, and scaling concerns expansion beyond initial validation (Achtenhagen et al., 2013; Cavallo et al., 2024).

Business model establishment, in turn, concerns the acquisition of the conditions that make the business model durable. It should therefore be treated as a distinct construct rather than as an implicit by-product of innovation, adaptation, growth, or scaling. Table 1 summarizes the differences between business model establishment and related constructs.

Table 1. Business Model Establishment and Related Constructs.

Construct	Primary Focus	Key Question
Business model innovation	Novelty	How is value creation redesigned?
Business model adaptation	Environmental response	How does the business model respond to change?
Business model evolution	Dynamic consistency	How does the business model change over time?
Business model scaling	Expansion	How is growth achieved beyond initial validation?
Business model establishment	Durability	How does the business model become robust, governable, and economically viable?

Source: Adapted from Demil and Lecocq (2010), Foss and Saebi (2017), Saebi et al. (2017), Achtenhagen et al. (2013), and Cavallo et al. (2024).

The introduction of business model establishment contributes to recent calls for greater construct clarity and stronger theorization of business model dynamics and outcomes (Foss & Saebi, 2017; Massa et al., 2017; Trischler & Li-Ying, 2023; Kohtamäki et al., 2024). By focusing on the conditions that allow digital business models to become durable organizational arrangements, the concept extends existing work on innovation, adaptation, evolution, and scaling and provides a conceptual infrastructure for future empirical research on digital business model trajectories.

2.3. Governance and Transaction Cost Economics

Transaction Cost Economics (TCE) provides the theoretical logic for explaining why establishment becomes difficult as digital business models scale. Rooted in Coase (1937) and Williamson (1979, 1985), TCE argues that transactions are not costless. Economic actors incur costs when they search for partners, evaluate reliability, negotiate and enforce agreements, monitor performance, resolve disputes, and protect themselves against opportunism. These costs vary according to transaction attributes, particularly transaction frequency, transaction uncertainty, and asset specificity, or, more broadly, dedicated investments (Williamson, 1979, 1985; Rindfleisch & Heide, 1997).

Transaction frequency concerns the intensity and repetition of exchange. When transactions are infrequent, it may be inefficient to create specialized governance arrangements. When transactions become frequent, however, dedicated systems for monitoring, coordination, and enforcement become more economical because their fixed costs can be spread

across a larger number of transactions. Transaction uncertainty refers to the difficulty of predicting the behavior of exchange partners, the quality of performance, the conditions under which exchange occurs, or the contingencies that may arise during or after the transaction. Asset specificity refers to investments that have lower value outside a particular transaction or relationship. In digital business models, asset specificity often takes non-physical forms, such as accumulated data, customer profiles, reputational capital, software interfaces, compliance routines, platform-specific learning, and participation-specific commitments.

Digital business models make transaction cost dynamics especially visible. They often originate as loosely coordinated systems of exchange enabled by digital technologies that reduce search costs, matching frictions, and entry barriers. Early-stage digital businesses may rely on open participation, standardized interfaces, simplified rules, and relatively light control. In the emergence phase, this can be strategically useful, as low-friction participation accelerates adoption, supports network effects, and allows the business model to test its value proposition without immediately incurring the full costs of organizational integration. However, as digital business models scale, the transactional conditions on which they rest tend to change: transaction frequency increases, the user base becomes more heterogeneous, exchange partners are often anonymous or socially distant, and participants may make larger dedicated investments in data, reputation, money, or business processes. These developments generate new transaction costs. The absence of direct relational ties, combined with scale and heterogeneity, increases the risks of opportunism, misrepresentation, fraud, service inconsistency, coordination failure, and regulatory non-compliance. As a result, digital business models may attract users and generate transaction volume, but unless the underlying exchanges can be organized reliably, repeated at scale, and protected against misuse, growth does not automatically become establishment. In this respect, the movement from emergence to establishment can be interpreted as a progressive process of governance integration. This perspective is consistent with TCE and with recent applications of governance theory to platform-based business models (Akbar & Tracogna, 2018, 2024).

2.4. Governance Mechanisms in Digital Business Models

The classification of governance mechanisms into measurement, adaptation, and safeguarding builds on Transaction Cost Economics, particularly on the framework proposed by Rindfleisch and Heide (1997), and is further adapted to digital business models following Akbar and Tracogna (2018, 2024). Rindfleisch and Heide (1997) identify measurement, adaptation, and safeguarding as central governance responses to transaction cost problems. Akbar and Tracogna (2018, 2024) apply this logic to platform-based business models and show how these mechanisms support the transition from weakly governed exchange toward more integrated organizational arrangements. Although this classification was initially developed in the context of platform and sharing-economy environments, it can be generalized to digital business models more broadly, as it captures the core governance functions they must perform when transactions become frequent, uncertain, and dependent on dedicated investments.

Measurement mechanisms reduce uncertainty by making the relevant aspects of transactions observable. They help identify who is participating in the system, what type of transaction is taking place, whether the transaction meets expected standards, and whether the actors involved are reliable. In digital business models, measurement mechanisms include identity verification, user profiling, know-your-customer procedures, anti-money-laundering controls, reputation systems, ratings, reviews, transaction monitoring, credit scoring, fraud detection, algorithmic risk assessment, performance indicators, and compliance reporting. These mechanisms substitute for the lack of prior personal knowledge

among transacting parties and allow trust to be constructed through data, analytics, and institutionalized procedures. Indeed, in digital markets, trust is often not the result of thick social relations, but of the systematic measurability of conduct, identity, and performance.

Adaptation mechanisms reduce uncertainty by allowing the system to adjust transactions to changing conditions and unexpected contingencies. They include dispute-resolution systems, customer support, rule-enforcement procedures, dynamic pricing, contractual standardization, exception handling, regulatory adaptation, product redesign, transaction limits, account restrictions, and operational flexibility. Adaptation is especially important in digital environments because transactions are not only numerous but also heterogeneous. Users differ in their behavior, countries differ in their regulations, technologies change quickly, and unexpected events can affect transaction execution. A digital business model that cannot adapt becomes rigid, and rigidity increases the likelihood of service breakdown, regulatory conflict, or loss of user confidence.

Safeguarding mechanisms protect the interests of the parties involved and the integrity of the system. They include escrow systems, payment protection, refund guarantees, insurance, cybersecurity, data protection, capital buffers, consumer protection procedures, collateral requirements, sanctions, exclusion rules, licensing, and formal compliance systems. Safeguarding mechanisms are especially important when participants commit assets, money, data, or reputational capital to the business model. Their function is to protect specific investments against opportunism, fraud, misuse, default, or coordination failure. Without safeguarding, users may participate only cautiously, or they may exit the system when the perceived risks become too high.

Table 2 summarizes the three governance mechanisms discussed above and shows how each mechanism addresses a specific transaction cost problem in digital business models.

Table 2. Governance mechanisms in digital business models.

Governance Mechanism	Transaction Cost Problem Addressed	General Function	Examples in Digital Business Models
Measurement	Transaction uncertainty caused by limited observability of users, conduct, quality, and performance	Makes relevant aspects of transactions observable and comparable	Identity verification; user profiling; ratings; reviews; reputation systems; transaction monitoring; performance indicators; algorithmic risk assessment; compliance reporting
Adaptation	Transaction uncertainty caused by changing conditions, heterogeneous users, and unexpected contingencies	Allows transactions and rules to adjust to evolving circumstances	Dispute resolution; customer support; dynamic pricing; rule enforcement; contractual standardization; product redesign; exception handling; regulatory adaptation
Safeguarding	Asset specificity and risk of opportunism, misuse, default, or hold-up	Protects dedicated investments and sustains trust in repeated transactions	Escrow systems; guarantees; insurance; cybersecurity; data protection; sanctions; exclusion rules; formal compliance systems

Source: Adapted from Rindfleisch and Heide (1997) and Akbar and Tracogna (2018, 2024).

Such governance mechanisms are analytically distinct but practically interdependent. Measurement makes transactions visible; adaptation makes them manageable; safeguarding makes them credible. Together, they transform a digital business model from a simple interface for exchange into a more integrated organizational arrangement. This transformation is central to business model establishment: as transaction frequency, uncertainty, and dedicated investments increase, digital business models must develop stronger mechanisms for measuring, adapting, and safeguarding transactions. When this process unfolds successfully, governance becomes one of the core foundations of business model estab-

lishment. The next step, however, is to recognize that governance is costly and must be financed. This leads to the second dimension of the framework: monetization.

3. Governance and Monetization as Co-Evolving Dimensions of Business Model Establishment

Governance mechanisms do not arise spontaneously from digital technology. They require investment and must be financed. This reality foregrounds the second dimension of business model establishment: monetization. Monetization refers to the business model's ability to capture value in ways that support continued operation, infrastructure development, compliance, risk management, and growth. This notion goes beyond revenue generation: a digital business model may generate revenue yet still lack mature monetization if its income streams are unstable, narrowly concentrated, reliant on subsidies, vulnerable to regulatory risk, or insufficient to meet the governance demands of scale. Mature monetization, therefore, refers to the stability, sufficiency, and diversification of value capture (Teece, 2010; Baden-Fuller & Haefliger, 2013; Foss & Saebi, 2017; Massa et al., 2017).

The importance of monetization is consistent with the broader business model literature. As discussed above, business models have been understood as architectures of value creation, delivery, and capture (Teece, 2010), as designs of transaction content, structure, and governance (Amit & Zott, 2001), and as activity systems through which firms organize interdependent activities across boundaries (Zott & Amit, 2010). The literature has also emphasized that business models are not merely revenue models; yet, revenue architecture is nevertheless central because value creation must eventually be connected to value capture (Chesbrough & Rosenbloom, 2002; Chesbrough, 2010; Teece, 2010). Reviews of the business model literature show that the construct has become central to management research, but also that it remains marked by conceptual variety and by the need for stronger theorization of dynamics and outcomes (Foss & Saebi, 2017; Massa et al., 2017).

The digital business model literature extends these ideas by emphasizing the role of digital technologies in reshaping value creation, delivery, and capture (Bharadwaj et al., 2013; Vial, 2019; Verhoef et al., 2021; Kohtamäki et al., 2024). Digital technologies allow firms to scale interactions, personalize services, collect and process data, connect multiple sides of a market, and redesign the boundaries between firms, users, and ecosystems. Kohtamäki et al. (2024) show that the digital business model literature has grown around several clusters, including digital business model innovation, Internet of Things business models, digital platform business models, and digital servitization business models. Across these clusters, the problem of monetization remains central because digital growth often precedes stable value capture. Digital firms may initially emphasize adoption, network effects, and user engagement, but establishment requires that these forms of digital expansion be translated into stable and economically sufficient revenue streams.

In digital business models, monetization may take several forms. These include commission fees, transaction fees, subscription fees, freemium models, advertising, data monetization, licensing, usage fees, interchange fees, interest income, spreads, premium services, embedded services, complementary services, and ecosystem-based revenue sharing (Amit & Zott, 2001; Teece, 2010; Baden-Fuller & Haefliger, 2013; Täuscher & Laudien, 2018). Platform studies show that commission-based models, subscription models, and advertising models are particularly common forms of platform monetization (Täuscher & Laudien, 2018; Akbar & Tracogna, 2024). However, each monetization mode carries different governance implications: a commission-based marketplace requires transaction monitoring, dispute resolution, and payment reliability; a subscription model requires retention, service quality, and continuous customer support; an advertising or data-monetization model requires data governance, consent management, and privacy safeguards. Likewise, a

credit-based model requires credit-risk measurement, affordability checks, default management, and consumer protection, while a trading-based model requires suitability controls, disclosures, execution-quality monitoring, and market-risk safeguards (Philippon, 2016; Thakor, 2020; Arner et al., 2015; Gomber et al., 2017).

This paper argues that for business models to establish themselves, governance and monetization must co-evolve. Governance supports monetization because value capture becomes more sustainable when the transactions that generate revenue are reliable, trusted, repeatable, and protected. Stronger governance enhances trust, reduces transactional frictions, supports regulatory legitimacy, and facilitates the continued participation of users and partners, thereby improving the conditions for value capture. Monetization, in turn, supports governance because the infrastructures that make transactions governable require resources. Revenue generated through successful monetization allows firms to invest in compliance, monitoring, risk management, customer protection, and organizational capabilities. The relationship is therefore reciprocal: governance without monetization leads to economically constrained models; monetization without governance leads to commercially extended but structurally fragile models. Business model establishment emerges when advances in one dimension reinforce development in the other over time.

The interaction between governance and monetization can be represented as a two-dimensional space that produces four archetypes, as illustrated in Table 3 below. In quadrant A (low governance and low monetization), emergent and fragile digital business models are found. These models may have a promising value proposition, early users, or technological novelty, but the exchange architecture remains weakly governed, and the revenue logic remains underdeveloped. At high governance and low monetization (quadrant B), organizationally developed but economically constrained models are found. These models may have built sophisticated systems of control, compliance, and risk management, but they have not yet developed sufficient value capture to finance those systems durably. Quadrant C comprises low governance and high monetization, where commercially successful but governance-fragile models are found. These models generate revenue, but the mechanisms of measurement, adaptation, and safeguarding are not adequate relative to the risks and complexity generated by scale. Lastly, at high governance and high monetization (Quadrant D), digital business models become established since these models combine governable exchange with stable value capture.

Table 3. Governance–Monetization Matrix.

	Low Monetization	High Monetization
Low governance	<i>Quadrant A: Emergent and fragile business models</i> Exchange is weakly governed and value capture is underdeveloped. These models may have user growth or technological novelty, but they lack both transactional governability and economic viability.	<i>Quadrant C: Commercially extended but governance-fragile business models</i> Revenue generation is significant, but governance mechanisms do not adequately match transaction complexity and risk.
High governance	<i>Quadrant B: Organizationally developed but economically constrained business models.</i> Measurement, adaptation, and safeguarding mechanisms are relatively advanced, but monetization is not yet sufficient or stable enough to support them durably.	<i>Quadrant D: Established business models</i> Governance and monetization co-evolve, allowing transactions to be reliably organized and economically sustained.

(Source: Authors' own).

Building on the preceding discussion, the governance–monetization matrix translates the two dimensions of business model establishment into four analytically distinct configurations. The matrix is derived from the proposition that establishment requires both

transactional governability and economic viability. Accordingly, the quadrants do not represent merely descriptive categories but different conditions in which the two requirements of establishment are either jointly present, jointly absent, or unevenly developed. This framing clarifies why the labels assigned to the four quadrants refer to the relative maturity of the business model rather than to firm performance in general.

The quadrant labels follow from this logic. Business models with low governance and low monetization are classified as emergent and fragile because they lack both core conditions of establishment. Models with high governance but low monetization are organizationally developed but economically constrained because they have built transactional governability without equivalent value capture. Models with high monetization but low governance are commercially extended but governance-fragile because value capture has advanced more rapidly than the mechanisms required to sustain reliable transactions. Finally, models with high governance and high monetization are established because they combine transactional governability with economic viability. The matrix should therefore be understood as a theoretically grounded representation of different establishment configurations, rather than as a merely descriptive classification.

Establishment depends on the co-evolution of governance intensity and monetization intensity. In other words, this typology is not a static one; rather, it describes positions within an evolutionary space. Digital business models may move across quadrants over time: some begin with weak governance and weak monetization and gradually strengthen both; others monetize rapidly and later discover that governance must be reinforced; others develop strong governance before monetization stabilizes; still others reach a more balanced configuration in which governance and monetization become mutually reinforcing. This implies that business model growth alone does not determine establishment. The concept of business model establishment captures the stage at which governance and monetization are sufficiently aligned to sustain operations under conditions of scale, complexity, and institutional constraint. In digital business models, this alignment is particularly difficult because the technologies that allow rapid growth may also allow transactional complexity to expand faster than organizational capabilities. This is why the governance-monetization framework is especially useful for studying digital sectors in which trust, regulation, and transaction intensity are central.

4. Fintech as a Domain of Digital Business Model Establishment

Financial technology, or fintech, provides an especially appropriate empirical domain for examining the establishment of digital business models. In broad terms, fintech refers to technology-enabled financial solutions, or to the application of digital technologies to the design, delivery, and reconfiguration of financial services (Arner et al., 2015). Gomber et al. (2017) define digital finance as encompassing new financial products, financial businesses, finance-related software, and novel forms of customer communication and interaction delivered by financial technology firms and innovative financial service providers. The sector therefore includes payments, digital banking, cross-border transfers, consumer credit, buy-now-pay-later services, wealth management, trading platforms, crypto-asset services, embedded finance, and financial infrastructure.

The economic relevance of the sector has grown in recent years. McKinsey estimates that the global fintech industry generated approximately USD 650 billion in revenues in 2025, growing by about 21 percent year on year from 2024 and materially outpacing the broader financial-services industry, which it estimates at approximately USD 15 trillion in revenues (McKinsey & Company & QED Investors, 2026). Boston Consulting Group and QED Investors similarly project that fintech revenues could reach approximately USD 1.5 trillion by 2030, while emphasizing that the industry is moving from a growth-at-all-

costs phase toward a phase in which profitable growth, prudence, and regulatory maturity are increasingly central (Boston Consulting Group & QED Investors, 2024). Statista reports that digital payments alone had more than three billion users globally in 2024, indicating the breadth of fintech adoption in everyday economic life (Statista, 2025). These data indicate that fintech is no longer a marginal or purely start-up-based phenomenon and has become a large and economically consequential domain of digital business activity.

Fintech is especially relevant for the co-evolution arguments in this paper as it combines the typical features of digital business models with the distinctive governance requirements of financial exchange. Like other digital business models, fintech firms rely on scalable software infrastructures, platform interfaces, data-intensive processes, network effects, and low-friction user acquisition. Financial technology transactions are also intrinsically trust-sensitive, regulated, and economically consequential. Firms must govern not only digital participation but also identity, fraud, credit risk, liquidity, regulatory compliance, information asymmetry, consumer protection, and transaction execution. This makes fintech a demanding setting in which to observe the co-evolution of governance and monetization.

Extant research supports this interpretation. Arner et al. (2015) describe fintech as part of a broader transformation of financial services after the global financial crisis, involving new entrants, new technologies, and new forms of financial intermediation. Gomber et al. (2017) emphasize that digital finance includes both the transformation of existing financial services and the emergence of new technology-based financial businesses. Philippon (2016) frames fintech as an opportunity to reduce the cost of financial intermediation, depending on the ability to manage risk, trust, and regulation. Thakor (2020) highlights the relationship between fintech and banking, emphasizing both the efficiency opportunities and the uncertainties created by new entrants and new technologies.

From a TCE perspective, fintech transactions exhibit precisely the characteristics that create dynamics for governance integration. First, they are high-frequency, with payments, card transactions, trading orders, account transfers, and buy-now-pay-later purchases occurring continuously and on a large scale. Second, they are uncertain, as users may misrepresent their identity, default on obligations, misuse the system, misunderstand risks, or engage in fraudulent behavior. Third, they involve dedicated investments on the part of key stakeholders: customers commit funds, data, and trust; merchants integrate payment systems while firms invest in compliance, software, data infrastructures, and licenses, and regulators impose ongoing obligations on fintech firms and their customers.

These structural characteristics render the three governance mechanisms discussed above especially important. Measurement mechanisms in fintech include identity verification, know-your-customer procedures, anti-money-laundering controls, transaction monitoring, fraud detection, credit scoring, affordability checks, customer risk profiling, and market surveillance. Adaptation mechanisms include dynamic credit limits, transaction restrictions, dispute resolution, complaint handling, regulatory adjustments, product redesign, stress responses, and market-specific compliance routines. Safeguarding mechanisms include deposit protection, account security, capital buffers, data protection, fraud reimbursement, payment guarantees, consumer protection procedures, licensing, and supervisory oversight.

At the same time, the monetization problem is especially visible in fintech. Fintech firms often start with low prices, free accounts, subsidized transactions, or attractive customer propositions designed to build scale. However, as they grow, they must finance increasingly expensive governance systems. Compliance teams, risk engines, fraud systems, cybersecurity, customer support, data infrastructure, regulatory reporting, and legal

controls are all costly. The capacity to monetize transactions, therefore, becomes a condition for the sustainability of governance itself.

Overall, fintech is more than an example of digital business model innovation; it illustrates the more demanding problem of digital business model establishment. Early user growth, attractive interfaces, and technological novelty may indicate emergence, but they do not necessarily indicate establishment. A fintech firm becomes established only when the digital architecture of value creation and delivery is matched by governance mechanisms capable of sustaining repeated financial transactions and by monetization mechanisms capable of funding those mechanisms over time. This makes fintech a representative domain for the broader argument of the paper, as it shows that the core challenge of digital business models is not only to attract users or create digital interfaces but to transform a promising exchange architecture into a durable organizational and economic arrangement. Fintech is especially suitable for examining this transformation because the costs of weak governance are highly visible: fraud, consumer harm, regulatory sanctions, credit loss, market disruption, and loss of trust. Similarly, the costs of weak monetization are visible: persistent losses, dependence on external financing, vulnerability to interest-rate conditions, and inability to support compliance and risk management at scale.

5. Methodology

5.1. Research Design

This study focuses on theory development rather than theory testing. More specifically, the paper introduces business model establishment as a new construct and develops a theoretical framework linking governance and monetization as co-evolving dimensions of digital business model establishment. Because the construct has not yet been operationalized empirically and because the relationships between governance, monetization, and establishment remain under-theorized, a qualitative multiple-case approach was considered appropriate.

Qualitative case studies are particularly suitable when research seeks to examine complex organizational phenomena in their real-world context and when theoretical development is the primary objective (Eisenhardt, 1989; Eisenhardt & Graebner, 2007; Yin, 2018). Rather than testing predefined hypotheses, case studies enable analytical generalization through the comparison of theoretically relevant observations. In this study, the cases serve an illustrative and theory-elaborating purpose. They are used to demonstrate how different combinations of governance and monetization correspond to distinct configurations of business model establishment.

The empirical focus on fintech is consistent with this objective. As discussed in the preceding section, fintech represents a particularly demanding context for digital business models because transactions are frequent, uncertain, heavily regulated, and financially consequential. These characteristics make governance requirements and monetization challenges especially visible, thereby providing an appropriate setting for examining the co-evolution of governance and monetization. Fintech, therefore, represents a suitable setting for examining business model establishment because governance failures rapidly generate financial, regulatory, and reputational consequences, while monetization challenges directly affect the sustainability of the governance infrastructure itself. The sector makes especially visible the reciprocal relationship between governance and monetization that underpins the framework developed in this paper.

5.2. Case Selection

The cases were selected employing purposive theoretical sampling rather than seeking to achieve statistical representativeness (Eisenhardt, 1989; Eisenhardt & Graebner, 2007).

The selection was guided by the governance–monetization framework developed in the preceding sections and by the objective of maximizing variation along the two focal dimensions of the framework, governance and monetization, while ensuring sufficient organizational maturity and public information availability to support comparative analysis.

The four cases, Revolut, Klarna, Robinhood, and N26, are not intended as exhaustive representations of the fintech sector. Rather, they were selected because they exhibit substantial variation in governance arrangements, monetization approaches, regulatory trajectories, and organizational development, thereby providing theoretically informative illustrations of different configurations of business model establishment. The cases were also selected because their organizational histories go beyond very early-stage start-ups. Each has operated for more than a decade, or close to a decade, has achieved substantial market visibility, and has developed a coherent business model. Age and scale, however, are not treated as proxies for establishment. A firm may operate for a decade, accumulate millions of customers, and still exhibit meaningful weaknesses in governance or monetization. The four cases were selected with this consideration in mind, as each possesses sufficient organizational history and market presence to make the analysis meaningful, while differing significantly in the extent to which governance and monetization have developed.

Following the development of the governance–monetization framework, the cases were interpreted as approximating different archetypes within the matrix. Revolut illustrates a configuration characterized by relatively strong governance and strong monetization. Klarna illustrates a configuration characterized by relatively strong governance but weaker monetization. Robinhood illustrates a configuration characterized by stronger monetization but weaker governance. N26 illustrates a configuration in which both governance and monetization remain comparatively underdeveloped. Together, the four cases allow the analytical space of the framework to be illustrated through organizations exhibiting different establishment trajectories.

5.3. Data Sources

The analysis relies on secondary data sources. These include annual reports, regulatory filings, supervisory decisions, company communications, investor materials, market analyses, industry reports, and financial press coverage. Secondary sources are appropriate in the fintech context because firms operate in highly visible environments characterized by extensive disclosure requirements and considerable public scrutiny. The use of multiple sources allows triangulation across different forms of evidence (Yin, 2018). This triangulation contributes to the validity of the analysis by allowing information from company, regulatory, industry, and independent market sources to be compared and corroborated. Reliability is supported by publicly available documentary sources, transparent case-selection criteria, and a clearly specified analytical procedure. Reliance on multiple source types also reduces the risk of bias that could arise from dependence on a single source and provides a more robust basis for interpreting governance and monetization developments across cases. Company reports provide information regarding business models, financial performance, strategic development, governance structures, and monetization mechanisms. Regulatory documents provide evidence regarding compliance, supervision, enforcement actions, and governance-related challenges. Industry reports and market analyses provide contextual information regarding competitive dynamics, growth trajectories, and sector evolution. Financial press sources complement these materials by documenting important organizational and institutional developments.

5.4. Analytical Procedure

The results presented in the case-analysis section were derived through a four-stage analytical procedure. First, evidence relating to governance mechanisms was identified for each case. Attention was devoted to the measurement, adaptation, and safeguarding mechanisms derived from TCE and discussed in Section 2. Evidence concerning identity verification, compliance procedures, fraud prevention, dispute-resolution systems, risk management practices, consumer protection mechanisms, and regulatory interactions was collected and analysed. Second, evidence relating to monetization was examined. This included the identification of revenue sources, revenue diversification, profitability indicators, value-capture mechanisms, funding structures, and the overall sustainability of monetization arrangements. Third, governance and monetization were assessed jointly. Rather than applying numerical indicators, the analysis relied on qualitative pattern matching (Yin, 2018). Firms were evaluated according to the relative maturity of their governance arrangements and monetization capabilities, with particular attention to the extent to which governance mechanisms and value-capture mechanisms appeared capable of supporting continued growth and organizational continuity. Fourth, each firm was positioned within the governance–monetization matrix developed in Section 3. The purpose of this exercise was not to produce definitive classifications but to illustrate how different combinations of governance and monetization correspond to different configurations of business model establishment. The resulting case analysis therefore serves as an analytical illustration of the framework rather than as a formal test of causal relationships. The emphasis is on theoretical elaboration, construct development, and the exploration of how governance and monetization interact in the establishment of digital business models. The final stage of the analysis involved a cross-case comparison aimed at identifying similarities and differences in the governance–monetization configurations exhibited by the four firms and assessing how these configurations relate to business model establishment.

The methodological choices discussed above are summarized in Table 4. The table provides an overview of the research design, including the theoretical objective of the study, the rationale for case selection, the sources of evidence employed, and the analytical procedure used to examine the relationship between governance and monetization. By consolidating the key methodological elements in a single format, the table facilitates transparency and provides a concise guide to the empirical component of the study.

Table 4. Summary of Research Design.

Element	Description
Research objective	Theory development and elaboration of the business model establishment construct
Research strategy	Qualitative multiple-case study
Theoretical foundation	Business model literature and Transaction Cost Economics
Case selection logic	Theoretical sampling based on variation in governance and monetization, while ensuring sufficient organizational maturity and public information availability for comparative analysis
Cases	Revolut, Klarna, Robinhood, N26
Industry context	Fintech
Data sources	Annual reports, regulatory filings, company communications, market analyses, industry reports, financial press
Unit of analysis	Digital business model
Analytical dimensions	Governance and monetization
Analytical approach	Qualitative pattern matching and cross-case comparison
Analytical outcome	Positioning of cases within the governance–monetization framework

6. Fintech Cases

Table 5 positions the four firms within the governance–monetization matrix. The purpose of the table is not to provide definitive classifications, but rather to offer an analytical interpretation of the dominant governance–monetization configuration exhibited by each firm and to examine alternative trajectories of business model establishment.

Table 5. Fintech Cases Matrix.

	Low Monetization	High Monetization
Low governance	Quadrant A: N26; emergent and incomplete	Quadrant C: Robinhood; monetized but governance-fragile
High governance	Quadrant B: Klarna; strong governance, weak monetization	Quadrant D: Revolut; toward establishment

(Source: Authors’ own).

6.1. Quadrant D: Revolut—High Governance/High Monetization (Toward Establishment)

Revolut represents the clearest case of a fintech business model moving toward full establishment. Founded in 2015 in the United Kingdom by Nikolay Storonsky and Vlad Yatsenko, Revolut began operations as a low-cost foreign-exchange and travel-money application. Over time, its business model evolved into a broad digital financial platform combining payments, accounts, cards, subscriptions, business services, trading, crypto-asset services, savings, credit, and banking services. In 2024, Revolut reported GBP 3.1 billion in revenue, up 72 percent year on year, and GBP 790 million in net profit. Its retail customer base grew by 38 percent, while active business customers increased by 56 percent (Revolut Group Holdings Ltd., 2025). Financial press reporting also indicated that Revolut passed 50 million customers in 2024, with growth supported by card payments, interest income, subscriptions, foreign exchange, wealth services, and crypto-asset activity.

Revolut’s institutional trajectory signals increasing establishment. The firm remains privately held, but its 2024 secondary share sale reportedly valued the company at approximately USD 45 billion, while allowing employees and some investors to obtain liquidity. Founder and chief executive officer Nikolay Storonsky reportedly sold part of his shares while retaining a substantial stake. Revolut also obtained a United Kingdom banking license in 2024, a particularly important institutional step because it strengthens the firm’s ability to expand from payments and electronic-money services toward fuller banking activities, including lending.

From a governance perspective, Revolut exhibits a high degree of integration across all three mechanisms. Measurement mechanisms include identity verification, know-your-customer procedures, anti-money-laundering controls, transaction monitoring, risk scoring, business onboarding, and product-specific monitoring across payments, banking, trading, and crypto-asset services (Revolut Group Holdings Ltd., 2025). These mechanisms are necessary because Revolut operates across multiple financial activities, each with different risk profiles and regulatory obligations. Adaptation mechanisms are visible in its continuous product expansion, its adjustment to heterogeneous regulatory regimes, its development of differentiated service tiers, and its ability to add new products to a common financial platform (Revolut Group Holdings Ltd., 2025). Safeguarding mechanisms include regulatory licensing, compliance infrastructure, security systems, customer protection procedures, account controls, data protection, and increasingly bank-like safeguards following the acquisition of a United Kingdom banking license (Revolut Group Holdings Ltd., 2025).

Revolut’s monetization is similarly advanced and diversified. Revenues are generated through interchange fees, subscriptions, foreign exchange margins, interest income, wealth services, business services, credit, and trading-related revenues. This diversification is

important because it reduces dependence on a single revenue source and allows the firm to finance the governance infrastructure required by scale. *Revolut's* business model, therefore, shows how monetization can support governance integration. The firm can invest in compliance, risk management, product development, customer support, and regulatory expansion because the business model generates multiple streams of value capture.

In sum, *Revolut* occupies quadrant D. It represents a digital business model that is approaching establishment because governance and monetization have evolved in parallel. Its remaining weaknesses are not irrelevant, however: establishment remains institutionally incomplete in some markets, and the firm's long-term durability depends on sustaining compliance across jurisdictions, becoming a primary banking relationship for more customers, and reducing exposure to volatile sources of revenue such as crypto-asset trading and favorable interest-rate conditions. Still, among the four cases, *Revolut* best illustrates the co-evolution of governance and monetization toward business model establishment.

6.2. Quadrant B: Klarna—High Governance/Low Monetization (Organizationally Developed but Economically Constrained)

Klarna illustrates a different configuration: relatively advanced governance but weaker monetization. Founded in 2005 in Sweden by Sebastian Siemiatkowski, Niklas Adalberth, and Victor Jacobsson, *Klarna* built its business model around digital payments, consumer credit, and buy-now-pay-later services. Its model is based on a two-sided commerce and credit network. On one side, it offers consumers deferred payment, instalment payments, shopping tools, and app-based financial services. On the other side, it offers merchants checkout, conversion, marketing, and payment solutions. *Klarna* reports approximately 93 million active consumers and more than 600,000 merchant partners, making it one of the largest digital commerce networks in the world ([Klarna Bank AB, 2025](#)). Market data indicate that *Klarna* generated about USD 2.8 billion in revenue in 2024 and approximately USD 105 billion in gross merchandise volume ([Business of Apps, 2026](#)).

Klarna's institutional evolution has been significant. It became one of Europe's most valuable private fintech firms during the low-interest-rate period, reaching a reported valuation above USD 45 billion in 2021, before its valuation fell sharply to around USD 6.7 billion in 2022 amid higher rates, weaker technology valuations, and concerns over consumer credit models. In 2025, *Klarna* pursued a United States stock market listing at a valuation far below its 2021 peak, a development that illustrates both its scale and the more difficult monetization environment of buy-now-pay-later business models. Founder Sebastian Siemiatkowski has remained central to the company as chief executive officer.

Klarna's governance is relatively strong because the buy-now-pay-later model requires repeated control over credit risk, consumer identity, merchant integration, repayment behavior, fraud detection, dispute handling, and regulatory compliance. Measurement mechanisms include credit scoring, affordability assessment, identity verification, repayment tracking, fraud detection, merchant evaluation, and transaction-quality monitoring. The model cannot scale without sophisticated measurement of consumer reliability and merchant transaction quality. Adaptation mechanisms include flexible repayment options, dynamic credit limits, dispute-resolution processes, merchant-specific integration, product redesign, and regulatory adjustments across markets. These mechanisms are necessary because repayment capacity, consumer protection rules, merchant categories, and macroeconomic credit conditions vary across countries and over time. Safeguarding mechanisms include credit-risk management, default control, fraud prevention, merchant protection, consumer protection systems, and compliance procedures.

Despite this governance maturity, *Klarna's* monetization remains structurally constrained. Revenue depends on merchant fees, interchange, consumer repayment behavior, credit-loss control, funding costs, and regulatory legitimacy. The company has generated

very large transaction volume and has built a sophisticated governance apparatus, but the economic conversion of that apparatus into stable profitability has been difficult. *Klarna* was loss-making for several years before reporting limited profitability, according to market data ([Business of Apps, 2026](#)). The problem is not a lack of adoption or lack of governance infrastructure. Rather, the issue is whether governance can be monetized sufficiently and durably in a credit-sensitive model.

Klarna, therefore, occupies quadrant B. It represents a business model that has achieved substantial organizational and transactional sophistication, but whose economic viability remains under pressure. In this case, governance has scaled faster than monetization. The weak dimension is not the absence of controls or infrastructure, but the fragility of value capture under conditions of credit risk, funding costs, regulatory scrutiny, and changing consumer trust.

6.3. Quadrant C: Robinhood—Low Governance/High Monetization (Commercially Extended but Governance-Fragile)

Robinhood is a case of strong monetization and comparatively weak governance. Founded in 2013 in the United States by Vladimir Tenev and Baiju Bhatt, Robinhood began operations as a mobile-first brokerage offering commission-free trading. Its business model is based on app-based retail investing, options trading, crypto-asset trading, margin lending, cash management, premium subscriptions, and interest-related revenues. *Robinhood* became publicly listed on the Nasdaq stock exchange in 2021, an important institutional step that differentiated it from many private fintech firms. In 2024, *Robinhood* reported total net revenues of USD 2.95 billion, up 58 percent year on year, and net income of USD 1.41 billion. It also reported 25.2 million funded customers and USD 193 billion in assets under custody ([Robinhood Markets Inc., 2025](#)).

Robinhood's institutional evolution has also involved changes in leadership and governance. Although Vladimir Tenev remains chief executive officer, co-founder Baiju Bhatt stepped down as chief creative officer and board member in 2024. The firm has evolved from a narrow commission-free trading application into a broader retail financial platform, adding retirement accounts, premium subscription services, credit card initiatives, international expansion, crypto-asset services, and adjacent financial products. *Robinhood's* annual report emphasizes expansion in crypto-assets, artificial intelligence-enabled tools, advisory products, international markets, and additional asset classes ([Robinhood Markets Inc., 2025](#)).

Robinhood's monetization is strong. Revenue streams include transaction-based revenues, payment for order flow, net interest income, margin lending, crypto-asset activity, and subscription services. The firm has demonstrated a strong ability to extract value from customer financial activity, particularly in trading and speculative asset classes. Its original consumer proposition was framed around commission-free access, but value capture occurs through the monetization of order flow, balances, trading activity, premium features, and financial services. In this respect, Robinhood is clearly not monetization-weak.

The weak dimension is governance relative to the sensitivity of the transactions it enables. Measurement mechanisms are present, including onboarding, account monitoring, transaction monitoring, and compliance reporting. However, these mechanisms have historically been questioned in relation to customer risk assessment, suitability, and user understanding, particularly for complex products such as options and crypto-assets. Adaptation mechanisms include trading restrictions, disclosures, customer support, and policy changes, but these have often appeared reactive, responding to crises, outages, or regulatory interventions rather than anticipating the risks created by rapid scale. Safeguarding mechanisms include account security, investor protection procedures, trading

controls, and regulatory compliance, but these mechanisms have been challenged by public controversies and regulatory actions.

The governance weakness is documented by regulatory sources. The United States Securities and Exchange Commission charged Robinhood Financial in 2020 with misleading customers about its revenue sources and failing to satisfy its duty of best execution. The Commission stated that *Robinhood* did not adequately disclose payments received from trading firms for routing customer orders and that its execution quality claims were misleading. Robinhood agreed to pay USD 65 million to settle the charges, without admitting or denying the findings ([United States Securities and Exchange Commission, 2020](#)). The Financial Industry Regulatory Authority later ordered Robinhood Financial to pay approximately USD 70 million in penalties and restitution for systemic supervisory failures, including false or misleading information provided to customers, technology outages, and weaknesses in options approval procedures ([Financial Industry Regulatory Authority, 2021](#)). These episodes indicate that monetization scaled faster than the safeguarding and adaptation mechanisms required by retail financial intermediation.

Robinhood, therefore, occupies quadrant C. It represents a business model where value capture has scaled rapidly, but governance mechanisms have not fully kept pace with the risks generated by that scale. This creates a structurally fragile configuration in which commercial success coexists with governance vulnerability. The case shows that strong monetization does not itself imply business model establishment. A fintech business model may be commercially successful while remaining governance-fragile when user protection, risk suitability, transparency, and transaction reliability lag behind the intensity of monetized activity.

6.4. Quadrant A: N26—Low Governance/Low Monetization (Emergent and Incomplete)

N26 represents a case of incomplete establishment, with weaknesses in both governance and monetization. Founded in 2013 in Germany by Valentin Stalf and Maximilian Tayenthal, N26 began operations as a mobile-first digital bank. Its business model consists of app-based current accounts, cards, payments, savings-related services, premium accounts, and increasingly investment and lending products. Unlike very early start-ups, N26 is not small in absolute terms. However, it remains analytically useful as a case of weak establishment because its governance and monetization have both been constrained relative to its ambition to become a pan-European digital bank.

N26's institutional evolution has been marked by both growth and regulatory constraint. The firm obtained a banking license and expanded across European markets, but its growth was restricted by the *Bundesanstalt für Finanzdienstleistungsaufsicht* (German Federal Financial Supervisory Authority), because of concerns regarding anti-money-laundering controls. That growth restriction was lifted on 1 June 2024. More recent reporting also indicates significant leadership change: co-founder Valentin Stalf announced that he would step back from the co-chief executive officer role and move toward the supervisory board, while remaining a major shareholder together with co-founder Maximilian Tayenthal ([Levingston & Storbeck, 2025](#)).

On the monetization side, N26 reported that 2024 revenue was expected to grow by around 40 percent to approximately EUR 440 million, with 4.8 million revenue-relevant customers by the end of 2024. It also reported its first quarterly profit in the third quarter of 2024, with net operating income of EUR 2.8 million ([N26 Group, 2024](#)). Yet, this evidence points to monetization that is still emerging rather than fully established. The firm's profitability has been recent, limited, and partly dependent on interest income from customer deposits. This creates vulnerability because interest-rate-driven monetization may weaken when rate conditions change.

The governance side has also been problematic. Measurement mechanisms, especially anti-money-laundering controls, suspicious-transaction monitoring, customer verification, and risk detection, have been subject to regulatory scrutiny. Adaptation mechanisms have been driven partly by external intervention, including the need to adjust growth, compliance processes, and organizational routines following restrictions imposed by the German Federal Financial Supervisory Authority. Safeguarding mechanisms have required strengthening in areas such as compliance, risk management, customer protection, and protection of the banking system from financial crime.

The governance weakness is supported by supervisory and company sources. N26 itself announced that the *Bundesanstalt für Finanzdienstleistungsaufsicht* had fully lifted its growth restriction effective 1 June 2024, and stated that the lifting followed a period of close exchange with the regulator and investments in teams and infrastructure to combat financial crime and money laundering (N26 Group, 2024). Reports on the regulatory intervention also indicate that the original restriction limited new customer sign-ups because of concerns over anti-money-laundering controls and that the supervisory process generated direct and indirect growth costs for N26 (Storbeck, 2024). In addition, external legal reporting confirms that the lifting of the growth restriction followed work on regulatory requirements related to financial crime and money laundering (White & Case LLP, 2024). These sources indicate that N26's governance weakness was not merely generic but specifically concerned with measurement and safeguarding functions around financial crime prevention, customer onboarding, and suspicious transaction monitoring.

The imposition of a regulatory growth cap and its subsequent lifting in 2024 illustrates the incomplete nature of governance integration. The lifting of the cap indicates governance improvement, but not necessarily full establishment. At the same time, monetization remains dependent on relatively narrow and evolving revenue streams, including interest income and premium account services. N26, therefore, has a recognizable digital banking model and a meaningful customer base, but its governance has been constrained by supervisory intervention, and its monetization has only recently approached profitability.

N26 thus occupies quadrant A. It represents a fintech business model that has emerged and scaled in terms of users but has not yet achieved the governance maturity or monetization stability required for establishment. Its weak governance dimension concerns measurement and safeguarding, especially anti-money-laundering controls, risk management, complaints handling, and regulatory compliance. Its weak monetization dimension concerns the limited and recent nature of profitability, dependence on interest income, and the still-evolving capacity to convert a digital banking customer base into durable recurring revenues.

7. Discussion

7.1. Theoretical Contributions

This paper contributes to the business model literature by introducing business model establishment as a distinct construct and by developing a governance–monetization framework for explaining how digital business models become durable organizational arrangements. The central argument is that business model establishment should not be treated as synonymous with innovation, growth, scaling, profitability, or organizational longevity. Rather, establishment refers to the acquisition of organizational robustness, transactional governability, and economic viability beyond the initial phase of emergence or expansion.

The first theoretical contribution concerns construct development. Existing research has generated important insights into business model innovation, adaptation, evolution, and scaling (Demil & Lecocq, 2010; Foss & Saebi, 2017; Saebi et al., 2017; Cavallo et al., 2024). However, comparatively less attention has been devoted to understanding the conditions

under which business models become stable organizational arrangements capable of sustaining transactions over time. By introducing business model establishment, the paper responds to calls for greater construct clarity and stronger theorization of business model dynamics and outcomes (Foss & Saebi, 2017; Massa et al., 2017; Trischler & Li-Ying, 2023; Kohtamäki et al., 2024). The concept complements rather than replaces existing constructs by focusing specifically on the conditions that enable organizational durability.

The second contribution concerns the integration of TCE and business model theory. TCE supplies the micro-level logic explaining why governance integration becomes progressively necessary as digital business models scale. As transaction frequency rises, uncertainty intensifies, and participants commit increasingly substantial dedicated investments, the costs of organizing exchange through informal or weakly governed arrangements become increasingly difficult to sustain. The paper extends this logic to the business model level by arguing that governance is not merely an operational adjustment but a constitutive dimension of business model establishment itself.

The third contribution is the governance–monetization framework. Governance, organized around measurement, adaptation, and safeguarding mechanisms, addresses the transactional complexity and uncertainty generated by scale. Monetization provides the economic foundation without which governance infrastructures cannot be sustained. The relationship between the two dimensions is reciprocal: governance supports monetization by rendering transactions reliable, trusted, and repeatable, while monetization supports governance by financing the organizational and technical systems that reliable transactions require. Establishment emerges when the two dimensions become sufficiently aligned to sustain operations under conditions of scale, complexity, and institutional constraint.

The comparative evidence provided by the four fintech cases reinforces and extends this argument. Taken together, the cases illustrate that fintech firms can occupy different positions in the governance–monetization space and that these positions are not merely descriptive. Revolut approximates the established configuration because governance and monetization have developed in mutually reinforcing ways. Klarna illustrates an organizationally consolidated but economically constrained configuration, where governance is substantial, but monetization remains fragile. Robinhood illustrates a commercially extended but governance-fragile configuration, where value capture is strong, but governance has historically lagged. N26 illustrates an incomplete and emergent configuration, where both governance and monetization remain under development. These cases show that substantial market visibility, large customer bases, and recognizable business models do not necessarily imply establishment.

The comparative evidence also helps explain why some fintech firms appear more established than others. The findings suggest that establishment cannot be inferred from growth, customer scale, valuation, organizational age, or even short-term profitability alone. All four firms have achieved substantial market visibility and recognizable business models, yet they differ significantly in the maturity and alignment of governance and monetization. The cases indicate that governance and monetization play complementary roles in shaping establishment outcomes. Strong governance without sufficiently mature monetization may produce organizationally sophisticated but economically constrained firms, as illustrated by Klarna. Conversely, strong monetization without commensurate governance may generate commercially successful but structurally fragile firms, as illustrated by Robinhood. These imbalances create different forms of vulnerability, including difficulties in sustaining governance investments, exposure to regulatory intervention, reputational damage, operational disruption, or erosion of user trust. Establishment therefore emerges not from excellence in either dimension alone, but from their alignment over time.

A related implication concerns the relationship between establishment and financial performance. While profitability may signal progress toward establishment, it should not be treated as a sufficient indicator. A firm may achieve profitability through favorable market conditions, temporary revenue opportunities, or narrow monetization mechanisms while remaining vulnerable from a governance perspective. Conversely, firms may incur substantial governance-related investments that temporarily constrain profitability while strengthening the foundations for long-term establishment. Establishment therefore concerns the alignment of governance and monetization capabilities rather than any single financial outcome observed at a particular point in time.

The cases also generate two broader theoretical insights. First, governance and monetization do not necessarily evolve at the same pace. Firms may achieve substantial monetization while governance remains comparatively underdeveloped, as illustrated by Robinhood, or they may develop sophisticated governance infrastructures while continuing to face monetization constraints, as illustrated by Klarna. The cases can therefore be interpreted not only as configurations but also as illustrative developmental patterns within the governance–monetization space. Klarna is broadly consistent with a governance-first pattern, Robinhood with a monetization-first pattern, Revolut with a more balanced co-development pattern, and N26 with an incomplete establishment pattern. While the purpose of the study is not to reconstruct the full evolutionary history of each firm, these patterns suggest that business model establishment may be approached through different governance–monetization pathways.

Second, co-evolution does not necessarily imply identical sequencing across industries or organizational contexts. Governance and monetization are jointly necessary for business model establishment, but the order in which they develop may vary. In highly regulated and trust-sensitive environments such as fintech, governance capabilities may need to develop relatively early because compliance, risk management, and user protection are prerequisites for sustainable value capture. In contrast, industries characterized by strong network effects and lower transaction risks may permit monetization and growth to advance ahead of governance integration. The framework therefore does not imply a single developmental sequence, but rather a common requirement that governance and monetization eventually become aligned if business model establishment is to occur.

The cases also allow consideration of alternative interpretations. One possible explanation is that differences between the firms are primarily a consequence of organizational age, scale, or market position. However, the comparative evidence provides only limited support for this view. All four firms have achieved substantial visibility, customer adoption, and organizational development, yet they occupy different positions within the governance–monetization framework. A second alternative explanation is that regulatory intensity alone determines establishment outcomes. While regulation clearly influences governance development, the cases suggest that firms operating under comparable regulatory pressures may nevertheless differ significantly in their monetization capabilities and overall establishment trajectories. The governance–monetization framework therefore provides a more comprehensive explanation by incorporating both transactional governability and economic viability as complementary dimensions of business model establishment.

Finally, the paper contributes to ongoing efforts to strengthen theorization within digital business model research by highlighting the reciprocal relationship between governance and monetization and by providing a conceptual infrastructure for future studies examining business model trajectories and organizational development. Overall, by theorizing the conditions under which digital business models become established, the paper extends existing work on business model innovation and scaling and offers a framework through which future research can examine the long-term sustainability of digital business models.

7.2. Practical and Managerial Implications

The framework developed in this paper has important implications for managers, entrepreneurs, investors, and policymakers involved in the development of digital business models.

First, the findings suggest that growth should not be treated as equivalent to establishment. Rapid customer acquisition, transaction growth, or market expansion may conceal weaknesses in governance mechanisms that only become visible when organizations operate at scale. Managers should therefore evaluate business model maturity not only through growth indicators but also through indicators of governance capability, including compliance systems, monitoring procedures, risk-management arrangements, dispute-resolution mechanisms, and safeguarding infrastructures.

Second, governance and monetization should be developed in parallel. Firms that prioritize growth and revenue generation while underinvesting in governance may expose themselves to regulatory sanctions, reputational damage, operational failures, fraud, or declining user trust. Conversely, firms that invest heavily in governance without developing sustainable monetization mechanisms may struggle to finance the organizational capabilities required for long-term continuity. Governance expenditures should therefore be viewed not simply as costs but as investments supporting the sustainability of value creation and value capture.

Third, the governance–monetization framework can serve as a diagnostic tool for assessing the developmental position of digital business models. By evaluating governance and monetization jointly, managers can identify imbalances, anticipate vulnerabilities, and prioritize interventions that support organizational durability. Managers should therefore evaluate business model maturity simultaneously along governance and monetization dimensions. The challenge is not merely to grow the business model, but to ensure that governance and monetization capabilities evolve at a comparable pace.

More broadly, the framework encourages managers to adopt a systemic perspective on business model development. Operational pressures often direct attention toward immediate growth, customer acquisition, regulatory compliance, or short-term profitability. The framework highlights that long-term establishment depends not on excellence in any single dimension, but on the co-evolution of governance and monetization capabilities over time. The fintech cases provide practical illustrations of these challenges. Revolut demonstrates the benefits of developing governance and monetization in parallel, while Klarna illustrates the difficulties that arise when monetization struggles to keep pace with organizational complexity. Robinhood highlights the risks associated with monetization that advances more rapidly than governance, and N26 illustrates the constraints that emerge when weaknesses persist in both dimensions. Together, the cases suggest that managerial attention should focus not only on scaling the value proposition but also on ensuring that governance and monetization capabilities evolve at a comparable pace.

Finally, the framework also offers insights for investors and policymakers. Investors often focus on growth metrics and revenue potential when evaluating digital ventures. The findings suggest that governance capabilities may be equally important indicators of long-term sustainability. Similarly, policymakers and regulators concerned with the stability of digital markets may benefit from recognizing that governance mechanisms contribute not only to compliance but also to the establishment and resilience of digital business models.

7.3. Limitations and Future Research

The study is subject to several limitations that create opportunities for future research. First, the empirical component focuses on four fintech firms selected to illustrate different

configurations of governance and monetization. While fintech provides a particularly informative setting for examining business model establishment, the findings cannot automatically be generalized to all digital industries. Future studies could apply the framework to platform businesses, digital marketplaces, software firms, digital health organizations, and sharing-economy platforms. Second, the analysis relies primarily on secondary data. Although such sources provide extensive information regarding organizational development, governance arrangements, financial performance, and regulatory interactions, they do not offer the same depth of insight that could be obtained through interviews, ethnographic observation, or other forms of primary data collection. Future research could therefore employ qualitative fieldwork to examine more directly how governance and monetization capabilities are developed within organizations. Third, the paper adopts a theory-building and theory-elaborating perspective rather than a theory-testing perspective. The governance–monetization framework therefore remains open to further empirical validation. Future studies could operationalize governance maturity and monetization maturity and examine their relationship to business model establishment using larger samples and quantitative methods. Finally, business model establishment is inherently dynamic. Firms may move between governance–monetization configurations as they grow, adapt, and respond to changing competitive and regulatory conditions. Longitudinal research would therefore be particularly valuable for examining the processes through which governance and monetization co-evolve over time and influence establishment trajectories. A particularly promising avenue concerns the study of governance–monetization trajectories and the conditions under which firms move across configurations over time. Such research could examine whether different industries exhibit distinct sequencing patterns, and whether governance-led or monetization-led paths are associated with different establishment outcomes. Comparative studies across industries and institutional contexts could also contribute to refining the framework and identifying boundary conditions affecting its applicability.

8. Conclusions

This paper examined how digital business models become established and proposed business model establishment as a distinct construct within the business model literature. Drawing on TCE and business model theory, the study argued that establishment depends on the co-evolution of governance and monetization. Governance provides the mechanisms required to organize, adapt, and safeguard transactions, while monetization provides the economic resources necessary to sustain these governance structures over time. The analysis of four fintech firms, Revolut, Klarna, Robinhood, and N26, illustrated how different combinations of governance and monetization may generate different establishment trajectories. More broadly, the findings suggest that business model establishment cannot be inferred from growth, scale, innovation, or organizational age alone. Rather, establishment depends on the alignment between transactional governability and economic viability. By introducing business model establishment and proposing a governance–monetization framework for explaining its development, the paper contributes to ongoing efforts to strengthen the theorization of digital business models and their evolution over time. The framework provides a foundation for future research on how digital organizations achieve durability and sustain value creation and value capture under conditions of increasing complexity, scale, and institutional constraints. In doing so, the paper encourages scholars and practitioners alike to move beyond growth as the dominant indicator of success and to consider the broader organizational conditions that support the long-term establishment of digital business models.

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References

- Achtenhagen, L., Melin, L., & Naldi, L. (2013). Dynamics of business models: Strategizing, critical capabilities and activities for sustained value creation. *Long Range Planning*, 46(6), 427–442. [\[CrossRef\]](#)
- Akbar, Y. H., & Tracogna, A. (2018). The sharing economy and the future of the hotel industry: Transaction cost theory and platform economics. *International Journal of Hospitality Management*, 71, 91–101. [\[CrossRef\]](#)
- Akbar, Y. H., & Tracogna, A. (2024). Travel and tourism sharing platforms: Governance and monetization strategies. *Current Issues in Tourism*, 27(22), 3770–3785. [\[CrossRef\]](#)
- Amit, R., & Zott, C. (2001). Value creation in e-business. *Strategic Management Journal*, 22(6–7), 493–520. [\[CrossRef\]](#)
- Arner, D. W., Barberis, J., & Buckley, R. P. (2015). *The evolution of FinTech: A new post-crisis paradigm?* (University of Hong Kong Faculty of Law Research Paper No. 2015/047). University of Hong Kong Faculty of Law. [\[CrossRef\]](#)
- Baden-Fuller, C., & Haefliger, S. (2013). Business models and technological innovation. *Long Range Planning*, 46(6), 419–426. [\[CrossRef\]](#)
- Bharadwaj, A., El Sawy, O. A., Pavlou, P. A., & Venkatraman, N. V. (2013). Digital business strategy: Toward a next generation of insights. *MIS Quarterly*, 37(2), 471–482. [\[CrossRef\]](#)
- Boston Consulting Group & QED Investors. (2024, June 26). *Global fintech 2024: Prudence, profits, and growth*. Boston Consulting Group.
- Business of Apps. (2026). *Klarna revenue and usage statistics*. Business of Apps.
- Cavallo, A., Cosenz, F., & Noto, G. (2024). Business model scaling: A system dynamics perspective on growth and value creation. *Technological Forecasting and Social Change*, 200, 123152. [\[CrossRef\]](#)
- Chesbrough, H. (2010). Business model innovation: Opportunities and barriers. *Long Range Planning*, 43(2–3), 354–363. [\[CrossRef\]](#)
- Chesbrough, H., & Rosenbloom, R. S. (2002). The role of the business model in capturing value from innovation: Evidence from Xerox Corporation's technology spin-off companies. *Industrial and Corporate Change*, 11(3), 529–555. [\[CrossRef\]](#)
- Coase, R. H. (1937). The nature of the firm. *Economica*, 4, 386–405. [\[CrossRef\]](#)
- Demil, B., & Lecocq, X. (2010). Business model evolution: In search of dynamic consistency. *Long Range Planning*, 43(2–3), 227–246. [\[CrossRef\]](#)
- Eisenhardt, K. M. (1989). Building theories from case study research. *Academy of Management Review*, 14(4), 532–550. [\[CrossRef\]](#)
- Eisenhardt, K. M., & Graebner, M. E. (2007). Theory building from cases: Opportunities and challenges. *Academy of Management Journal*, 50(1), 25–32. [\[CrossRef\]](#)
- Financial Industry Regulatory Authority. (2021, June 30). *FINRA orders record financial penalties against Robinhood Financial LLC*. Financial Industry Regulatory Authority.
- Foss, N. J., & Saebi, T. (2017). Fifteen years of research on business model innovation: How far have we come, and where should we go? *Journal of Management*, 43(1), 200–227. [\[CrossRef\]](#)
- Gomber, P., Koch, J.-A., & Siering, M. (2017). Digital finance and financial technology: Current research and future research directions. *Journal of Business Economics*, 87, 537–580. [\[CrossRef\]](#)
- Klarna Bank AB. (2025). *Annual report 2024*. Klarna Bank AB.
- Kohtamäki, M., Leminen, S., & Parida, V. (2024). Conceptualizing digital business models: Framing the interplay between digitalization and business models. *Technovation*, 133, 103013. [\[CrossRef\]](#)
- Levingston, I., & Storbeck, O. (2025, August 19). N26 co-founder Valentin Stalf to step back from co-chief executive role. *Financial Times*.
- Magretta, J. (2002). Why business models matter. *Harvard Business Review*, 80(5), 86–92. [\[PubMed\]](#)
- Massa, L., Tucci, C. L., & Afuah, A. (2017). A critical assessment of business model research. *Academy of Management Annals*, 11(1), 73–104. [\[CrossRef\]](#)
- McKinsey & Company & QED Investors. (2026). *The next age of fintech: Artificial intelligence, digital assets, and new paths to success*. McKinsey & Company.
- N26 Group. (2024, June 4). *N26 welcomes BaFin's lift of its growth restriction*. N26 Group.

- Nambisan, S. (2017). Digital entrepreneurship: Toward a digital technology perspective of entrepreneurship. *Entrepreneurship Theory and Practice*, 41(6), 1029–1055. [\[CrossRef\]](#)
- Nambisan, S., Lyytinen, K., Majchrzak, A., & Song, M. (2017). Digital innovation management: Reinventing innovation management research in a digital world. *MIS Quarterly*, 41(1), 223–238. [\[CrossRef\]](#)
- Parker, G. G., & Van Alstyne, M. W. (2005). Two-sided network effects: A theory of information product design. *Management Science*, 51(10), 1494–1504. [\[CrossRef\]](#)
- Parker, G. G., Van Alstyne, M. W., & Choudary, S. P. (2016). *Platform revolution: How networked markets are transforming the economy and how to make them work for you*. W. W. Norton & Company.
- Philippson, T. (2016). *The FinTech opportunity* (NBER Working Paper No. 22476). National Bureau of Economic Research. [\[CrossRef\]](#)
- Revolut Group Holdings Ltd. (2025). *Annual report 2024*. Revolut Group Holdings Ltd.
- Rindfleisch, A., & Heide, J. B. (1997). Transaction cost analysis: Past, present, and future applications. *Journal of Marketing*, 61(4), 30–55. [\[CrossRef\]](#)
- Robinhood Markets Inc. (2025). *Annual report 2024*. Robinhood Markets Inc.
- Saebi, T., Lien, L., & Foss, N. J. (2017). What drives business model adaptation? The impact of opportunities, threats and strategic orientation. *Long Range Planning*, 50(5), 567–581. [\[CrossRef\]](#)
- Statista. (2025). *Fintech: Statistics and facts*. Statista.
- Storbeck, O. (2024, May 28). Fintech N26 says regulatory action cost it “billions” in lost growth. *Financial Times*.
- Täuscher, K., & Laudien, S. M. (2018). Understanding platform business models: A mixed methods study of marketplaces. *European Management Journal*, 36(3), 319–329. [\[CrossRef\]](#)
- Teece, D. J. (2010). Business models, business strategy and innovation. *Long Range Planning*, 43(2–3), 172–194. [\[CrossRef\]](#)
- Thakor, A. V. (2020). Financial technology and banking: What do we know? *Journal of Financial Intermediation*, 41, 100833. [\[CrossRef\]](#)
- Trischler, M. F. G., & Li-Ying, J. (2023). Digital business model innovation: Toward construct clarity and future research directions. *Review of Managerial Science*, 17, 3–32. [\[CrossRef\]](#)
- United States Securities and Exchange Commission. (2020, December 17). *SEC charges Robinhood Financial with misleading customers about revenue sources and failing to satisfy duty of best execution*. U.S. Securities and Exchange Commission.
- Verhoef, P. C., Broekhuizen, T., Bart, Y., Bhattacharya, A., Dong, J. Q., Fabian, N., & Haenlein, M. (2021). Digital transformation: A multidisciplinary reflection and research agenda. *Journal of Business Research*, 122, 889–901. [\[CrossRef\]](#)
- Vial, G. (2019). Understanding digital transformation: A review and a research agenda. *Journal of Strategic Information Systems*, 28(2), 118–144. [\[CrossRef\]](#)
- White & Case LLP. (2024, June 4). *White & case advises N26 on lifting of BaFin growth restriction*. White & Case LLP.
- Williamson, O. E. (1979). Transaction-cost economics: The governance of contractual relations. *Journal of Law and Economics*, 22(2), 233–261. [\[CrossRef\]](#)
- Williamson, O. E. (1985). *The economic institutions of capitalism*. Free Press.
- Yin, R. K. (2018). *Case study research and applications: Design and methods* (6th ed.). Sage.
- Yoo, Y., Henfridsson, O., & Lyytinen, K. (2010). Research commentary: The new organizing logic of digital innovation: An agenda for information systems research. *Information Systems Research*, 21(4), 724–735. [\[CrossRef\]](#)
- Zott, C., & Amit, R. (2010). Business model design: An activity system perspective. *Long Range Planning*, 43(2–3), 216–226. [\[CrossRef\]](#)
- Zott, C., Amit, R., & Massa, L. (2011). The business model: Recent developments and future research. *Journal of Management*, 37(4), 1019–1042. [\[CrossRef\]](#)

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