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UNRAVELING COMPETITIVE INTERPLAY: AN EVOLVING RESEARCH PERSPECTIVE

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ABSTRACT

This article provides an in-depth review of the evolving landscape of competitive rivalry research, highlighting intellectual shifts that have moved beyond traditional economic models to embrace behavioral, technological, and network-based perspectives. We explore how technology cycles profoundly influence competitive reactions, noting that multimarket participation is a critical factor affecting the likelihood and speed of these responses. The framework of agglomeration theory offers insights into the strategic positioning of new market entrants and its impact on incumbent reactions. Furthermore, we examine the sophisticated role of competitive signals, both deliberate and unintentional, as key communication mechanisms among rivals preceding and following market entry. The analysis extends to the formation of alliances, considering how they function as competitive reactions or, if pre-existing, influence the propensity for rivalry. Finally, we delve into the implications of competitor networks, which foster interdependency and shape the aggressiveness of competitive responses. Collectively, these concepts are crucial for understanding firms' reactions and defensive strategies when confronted by new entrants, disruptive technologies, or innovative products. We conclude by identifying promising avenues for future research in this dynamic field.

Keywords: Competitive dynamics; Multimarket participation; Agglomeration theory; Competitive signals; Alliances; Networks; Technology cycles.

INTRODUCTION

Competitive rivalry stands as a cornerstone of strategic management, fundamentally influencing how industries are structured, how individual firms perform, and how markets evolve over time. It encompasses the intricate, often high-stakes, interactions between organizations that are all striving for market share, scarce resources, and the unwavering loyalty of customers [7, 8]. Grasping these complex interactions—the motivations behind a firm's initial actions, and the subsequent responses from its competitors—is paramount for both academic scholars delving into theoretical frameworks and industry practitioners devising effective strategies within an ever-shifting global economic landscape. The specialized field of competitive dynamics goes beyond conventional, static industry analyses, diving deeply into the granular, micro-level actions and reactions among rival firms to capture the fluid, interdependent, and often unpredictable nature of market contests.

Historically rooted in the foundational principles of industrial organization economics, the body of research dedicated to competitive rivalry has undergone a profound and continuous evolution. This journey has seen a significant broadening of its theoretical underpinnings and a diversification of its methodological approaches. This progression reflects a growing, collective recognition of the inherent complexity in interfirm competition, moving beyond overly simplistic models that primarily focused on price-based competition. Modern analyses now embrace nuanced perspectives that incorporate behavioral psychology, organizational theory, technological advancements, and network-based interactions.

This comprehensive article aims to present an evolutionary analysis of research on competitive rivalry. Our objective is to meticulously trace its development from its early foundational theoretical concepts to its current multifaceted and highly dynamic state. By systematically synthesizing key contributions and identifying prominent and emerging themes throughout this intellectual trajectory, we highlight the progression of thought within this vital research domain. This review is meticulously structured following the IMRaD (Introduction, Methods, Results, and Discussion) format to provide a clear, logical, and systematic presentation of the vast landscape of competitive dynamics research. We intend to provide a robust framework for understanding the field's past achievements, its current complexities, and its promising future directions.

METHODS

This article undertakes a comprehensive synthesis of a substantial and diverse body of literature pertaining to competitive rivalry. Its primary aim is to provide a qualitative, in-depth review of the field's evolutionary trajectory, emphasizing how theoretical perspectives and practical considerations have developed over time. The methodological approach employed for this review involved a systematic and iterative examination of several categories of scholarly works: foundational texts that established early principles, seminal papers that marked significant intellectual shifts, and contemporary research trends observed across the disciplines of strategic management, marketing, and economics.

The selection of literature for inclusion was rigorously guided by the extensive list of references provided by the user. This curated list served as the primary corpus, ensuring that the review remained focused on established and relevant contributions to the domain of competitive dynamics. Each reference was carefully scrutinized to identify its specific contribution in terms of theoretical advancements, empirical insights derived from real-world observations, and any thematic shifts it represented within the broader field. The objective was to create a coherent narrative that accurately reflects the historical progression of thought without merely summarizing individual papers.

The analytical process applied to this body of literature focused on delineating distinct, yet often overlapping, phases in the evolution of competitive dynamics research. These phases were characterized by several key analytical dimensions:

- Dominant Theoretical Paradigms: This involved tracing the intellectual migration from purely economic models, which often assumed rational actors and perfect information, towards more holistic frameworks. These newer frameworks progressively incorporated nuanced behavioral theories, acknowledging cognitive biases and decision-making heuristics; organizational theories, recognizing the influence of internal structures and routines; and sociological theories, emphasizing relational and network-based interactions. For instance, the shift from Hotelling's spatial competition [45] to the behavioral insights of Cyert and March [18] represents such a paradigm shift.

- Key Concepts and Constructs: A critical aspect of this review was the meticulous tracing of the emergence, development, and refinement of core ideas central to competitive dynamics. This included concepts such as multimarket contact (MMC) and its associated mutual forbearance hypothesis [1, 21, 22], the multifaceted aspects of signaling theory in competitive contexts [5, 41, 77], the strategic implications of first-mover advantage [13], the complex dynamics of product preannouncements [63], and the strategic necessity and challenges of alliance formation [12, 42]. The evolution of these concepts highlights the increasing granularity and sophistication of competitive analysis.

- Methodological Advancements: While this review does not explicitly detail the specific research methodologies (e.g., econometric models, qualitative case studies) employed by past studies, it implicitly acknowledges how the adoption of different theoretical lenses facilitated and necessitated new empirical investigations. For example, the need to test the mutual forbearance hypothesis led to empirical studies analyzing market entry and exit rates [7]. Similarly, the exploration of competitive signals necessitated research into public announcements and their interpretations [60, 63, 70]. The increasing complexity of the concepts under study often correlated with the development of more sophisticated analytical tools.

- Contextual Factors and External Influences: The review also recognizes and integrates the profound influence of broader technological changes and significant market shifts on the very nature of competitive interactions. This includes the impact of digitalization, the transformative potential of Artificial Intelligence (AI) [49, 79], the emergence and implications of platform ecosystems [50, 66], and shifts in global supply chains [14]. These external factors have not merely modified existing competitive dynamics but have often created entirely new arenas and rules for competition, necessitating continuous adaptation of theoretical frameworks.

The comprehensive compilation and systematic interpretation of insights from the provided references allowed for the construction of a cohesive narrative. This narrative meticulously illustrates the intellectual progression and diversification of thought within competitive dynamics. Each piece of knowledge, every theoretical proposition, and every empirical finding integrated into this review is appropriately attributed through consistent numerical citations, ensuring academic rigor and transparency. The overarching aim was not to conduct a meta-analysis, which involves quantitative synthesis, but rather to provide a comprehensive, structured, and deeply analytical overview that illuminates the historical development, current complexities, and prospective frontiers of this vibrant and critically important research area.

RESULTS

The evolutionary trajectory of research on competitive rivalry can be effectively delineated into several distinct, yet interconnected, phases. Each phase represents a significant advancement, building upon prior insights and integrating increasingly sophisticated theoretical lenses, empirical observations, and real-world strategic considerations.

Early Foundations and Economic Underpinnings

The initial conceptualizations of competition were firmly

entrenched in the principles of traditional industrial organization economics. Early models often focused on idealized market structures, such as perfect competition or oligopoly, and analyzed firm behavior primarily through the lens of price and quantity adjustments. A foundational contribution in this vein was Harold Hotelling's (1929) seminal work on spatial competition [45]. His model, which famously described two competitors of undifferentiated products optimally locating themselves on a linear market (e.g., ice cream stands on a beach or gas stations on a straight street), provided a basic framework for understanding competitive positioning. It suggested a tendency towards agglomeration, where firms cluster together, which could lead to product standardization and intense price competition unless other factors intervened.

Further challenging simplistic views of market power, Corwin Edwards (1955) introduced the concept of "conglomerate bigness" as a significant source of market influence [19]. Edwards argued that large, diversified firms, operating in multiple product or geographic markets, could leverage their presence in one market to exert pressure or deter entry in another. This idea subtly hinted at the notion of interconnectedness across markets, laying a conceptual precursor for later theories of multimarket contact. These early economic analyses, while foundational, often presented a somewhat static view of competition, focusing on equilibrium outcomes rather than the dynamic interplay of actions and reactions.

A profound theoretical shift began to emerge with the advent of behavioral theories of the firm, which moved beyond the purely rational, profit-maximizing assumptions of classical economics. R.M. Cyert and J.G. March's (1963) influential work, "A Behavioral Theory of the Firm," was instrumental in this transition [18]. They posited that firms are not monolithic, perfectly rational entities but rather complex organizations whose decisions are influenced by internal processes, organizational learning, established routines, and the bounded rationality of their managers. This perspective introduced a more nuanced understanding of how firms perceive competitive threats, process information, and formulate responses, setting the stage for future research that explored cognitive and organizational factors in competitive dynamics.

Building on this behavioral foundation, Richard R. Nelson and Sidney G. Winter's (1982) "An Evolutionary Theory of Economic Change" further solidified the dynamic and adaptive nature of firms in competitive environments [62]. Their work emphasized the role of organizational routines, search processes, and the gradual accumulation of knowledge as firms learn and adapt to changing market conditions and competitive pressures. This evolutionary perspective provided a powerful lens for understanding how firms develop capabilities and strategies over time in response to the actions of rivals and broader environmental shifts, moving away from simple equilibrium analyses to more dynamic, process-oriented views of competition.

The Rise of Competitive Dynamics: Multimarket Contact and Mutual Forbearance

The mid-1980s heralded a significant maturation of the field, with "competitive dynamics" emerging as a distinct and vibrant area of academic inquiry. This period witnessed a concentrated effort to understand the granular, action-and-reaction sequences between competing firms. A central theoretical construct that gained considerable prominence during this time was multimarket contact (MMC), defined as the degree to which a set of firms simultaneously compete against each other in multiple distinct geographic or product markets.

Early empirical work began to explore the implications of MMC. Heggestad and Rhoades (1978) investigated multimarket interdependence specifically within the banking sector, observing how competitive behavior in one market could be influenced by a firm's presence in others [40]. Following this, Donald L. Alexander (1985) and Robert M. Feinberg (1984, 1985) conducted empirical tests of the "mutual forbearance hypothesis" [1, 21, 22]. This hypothesis posited that firms, particularly those with high multimarket contact, would exhibit less aggressive competitive behavior in any single market. The rationale was that an aggressive move in one market could trigger retaliatory actions from rivals in other markets where both firms also competed, leading to a mutually detrimental "war of attrition." Thus, the threat of cross-market retaliation served as a powerful deterrent, fostering a more benign, "live-and-let-live" competitive environment. This concept of forbearance found parallels with Oliver Williamson's (1983, 1996) notion of "hostages," where interdependent relationships limit opportunism due to the fear of reprisal [84, 85]. In essence, multimarket contact placed each competitor in a position of mutual hostage, making aggressive moves inherently riskier.

Joel A.C. Baum and Helaine J. Korn were instrumental in formalizing and advancing the study of competitive dynamics. Their 1996 paper explicitly defined competitive dynamics as the systematic study of interfirm rivalry actions and reactions [7]. They provided empirical support for the forbearance hypothesis, observing lower rates of market entries and exits among airlines with high multimarket contact in the California commuter market. Their subsequent 1999 work further delved into the intricacies of dyadic competitive interactions, analyzing the specific action-reaction patterns between pairs of firms [8].

The theory of multimarket competition was comprehensively synthesized by Jayachandran, Gimeno, and Varadarajan (1999), who meticulously outlined its significant implications for marketing strategy [46]. Empirical work continued to deepen this understanding.

Javier Gimeno (1999) examined reciprocal threats within the U.S. airline industry, illustrating how firms strategically carved out "spheres of influence" in specific markets where they held dominant positions, thereby accentuating forbearance effects [30]. Kang, Bayus, and Balasubramanian (2010) provided further evidence supporting mutual forbearance in the highly competitive personal computer industry [47]. Yu and Cannella (2013) contributed a comprehensive review of the entire body of multimarket competition research, highlighting its broad applicability and theoretical depth [89].

More recent scholarship continues to explore the nuanced implications of MMC. Ryan-Charleton and Galavan (2024) investigated its effects on alliance survival, suggesting that multimarket participation can increase the odds of alliance endurance, though this effect might be weakened under conditions of high technological overlap and intensive R&D activities within the alliance [71]. Similarly, Ryu, Reuer, and Brush (2020) examined how multimarket contact influences partner selection for technology cooperation, indicating that greater familiarity among firms facilitates scanning competitors' actions, which acts as a deterrent to intense competition [72].

Despite the general tendency towards forbearance, this does not imply an absence of competition. Instead, firms under MMC often shift their competitive focus away from direct price wars, which can be mutually destructive. Evidence suggests that new product introductions become a key strategic lever to enforce mutual forbearance, allowing firms to differentiate through product features rather than engaging in a downward spiral of price competition [47]. However, this equilibrium of forbearance can be disrupted. While early literature often focused on single instances of entry and reaction [27, 28, 69, 70], competitive rivalry is an ongoing phenomenon. A shift from a forbearing equilibrium might be triggered by an unpredictable move from an existing competitor who no longer fears retribution, or, more significantly, by a new entrant introducing a dramatically different, inimitable product, often the result of a technologically discontinuous innovation.

This leads to several critical research questions concerning multimarket competition:

- Does multimarket participation consistently reduce the probability of competitive reaction, or are there specific conditions under which this effect is negated or even reversed?
- What are the precise conditions under which forbearance reliably emerges as an outcome of multimarket participation, and how stable is this outcome over time (i.e., is there a decay function)?
- How does multimarket participation influence the likelihood and nature of alliance formation, and how does this vary with alliance type (e.g., R&D vs. marketing)?
- Which marketing instruments (e.g., product features, advertising, distribution) are most likely to be employed under conditions of multimarket participation, especially when price competition is deterred?
- Is there a higher incidence of new product introductions in multimarket settings, and does this vary based on the nature of the innovation (incremental vs. radical)?
- Is forbearance accentuated when firms hold dominant shares in distinct, rather than overlapping, markets?
- Under what conditions do firms in oligopolies abandon forbearance and choose to risk a competitive war, despite the potential for mutual destruction?
- How does the increasing automation of competitive intelligence, such as automatic computer tracking of competitive prices, influence the incidence and speed of competitive reactions?
- To what extent does Artificial Intelligence (AI) encourage or amplify competitive reactions, and does AI lead to stronger overall industry rivalry, especially in direct-to-consumer (D2C) markets with fewer intermediaries?

Expanding Scope: Innovation, Networks, and Alliances

As the field of competitive dynamics matured, its scope broadened considerably, moving beyond immediate actions and reactions to encompass more expansive strategic phenomena. This expansion recognized that competitive advantage is not solely forged in direct confrontation but is also deeply influenced by a firm's capacity for innovation, its embeddedness within inter-organizational networks, and its strategic engagement in alliances.

The role of innovation and technological change became a paramount focus. Joseph A. Schumpeter’s (1950) profound concept of "creative destruction" underscored that capitalism’s inherent dynamism arises from new innovations constantly disrupting and displacing existing market structures and established firms [74]. This disruptive force meant that competition was not merely about optimizing existing operations but about fundamentally redefining the industry. Building on this, Philip Anderson and Michael L. Tushman (1990) developed a cyclical model of technological change [4]. Their model highlighted how industries oscillate between periods of "ferment," characterized by intense competition among different technological designs following a discontinuous innovation, and periods of "incremental change," where a dominant design emerges, and competition shifts to refinement and efficiency. During the ferment era, firms compete primarily on the product or technology itself, aiming to establish the new standard. Once a dominant design is established, competition intensifies around marketing mix variables like pricing, advertising, and service, as R&D investments become less

intense for incremental improvements.

Ralph Landau (1984) further explored the very "Nature of Technological Knowledge," emphasizing that the type of knowledge—whether it is competence-destroying or competence-enhancing—has significant implications for incumbent firms [53]. Competence-enhancing discontinuities build on existing know-how, giving incumbents a relative advantage. In contrast, competence-destroying innovations render existing skills obsolete, forcing incumbents to acquire new capabilities, which limits their ability to compete, especially on price, and may even lead to market exit unless they can strategically align with new players [4, 6]. Julian Birkinshaw (2022) points out that the impact of such technologies can span decades, and established players often find ways to survive and thrive [9].

More recently, Hakan Ozalp, J.P. Eggers, and Franco Malerba (2023) examined industry evolution through the lens of generational technology cycles, highlighting the dynamic value of firm experience. Their research in the video game industry showed that "depth of experience" (domain-specific resources useful during stable and later periods of industry evolution) is more crucial for survival across multiple generational changes than "experience breadth" (organizational flexibility valuable during technology transitions and in younger industries) [64]. This suggests that understanding how competitive rivalry differs across technology cycle phases is crucial, especially as new technologies, like Generative AI, are introduced. Krakowski et al. (2023) explored how AI adoption changes competitive advantage, suggesting that human-AI interaction drives performance, challenging traditional notions of human capability [49]. This raises important questions about how incumbent responses should change with AI-enabled new entrants, how AI affects barriers to entry, and how AI capabilities influence the speed and effectiveness of reactions.

The increasing importance of networks and alliances in shaping competitive landscapes also gained significant traction. Mark S. Granovetter's seminal work on "the strength of weak ties" (1973, 1983) provided a sociological foundation for understanding how information flows, innovation, and competitive dynamics are profoundly influenced by inter-firm relationships, even informal ones [32, 33]. C.J. Fombrun (1982) suggested strategies for network research in organizations, recognizing their strategic value [24]. The strategic decision of whether to "Build, Borrow, or Buy" (Capron & Mitchell, 2012) became a critical consideration for firms seeking growth, emphasizing that firms cannot always go it alone but must strategically engage with others [12].

Research began to explore how R&D alliances and broader portfolios of interfirm agreements impact innovation output and firm performance [17, 73, 82, 88]. Aric Rindfleisch (2000) and Rindfleisch and Christine Moorman (2001) investigated the role of organizational trust and information acquisition in alliances, highlighting that horizontal alliances (among competitors) tend to foster less cooperation than vertical ones (along the supply chain) due to lower trust, though trust can develop over time [67, 68, 82]. Walter W.C.C. Chung, Anthony Y.K.K. Yam, and Michael F.S.S. Chan (2004) examined the rise of "networked enterprises" as a new business model for global sourcing, where interconnected firms collaborate across borders [14]. Henrich Greve, Tim Rowley, and Andrew Shipilov (2014) provided practical insights into unlocking value from alliances and partnerships, distinguishing between "hub-and-spoke" and "integrated" alliance configurations [34].

New product development and market entry also received significant academic attention as crucial competitive maneuvers. Gregory S. Carpenter and Kent Nakamoto (1989) studied consumer preference formation and the strategic advantages enjoyed by pioneers [13]. Hubert Gatignon, Erin Anderson, and Kristiaan Helsen (1989) explored various competitive reactions to market entry, explaining interfirm differences in response [27]. Similarly, Thomas S. Robertson and Hubert Gatignon (1991) investigated strategies employed by innovators to thwart new entrants into their markets [69]. Robertson, Jehoshua Eliashberg, and Talia Rymon (1995) focused on the impact of new product announcement signals on incumbent reactions, examining the credibility and clarity of such signals [70]. Venkatesh Shankar (1999) further explored the complex interrelationships between new product introductions, incumbent response strategies, and the moderating role of multimarket contact [75]. Studies also delved into factors influencing new product success in internal processes versus alliance-based collaborations [76], the role of geographic proximity in new product development [25], and the impact of team characteristics like familiarity and competence diversity on new product performance [37].

Marketing and Strategic Decisions in Competitive Contexts

Beyond the broader strategic phenomena, a significant body of research focused intently on specific marketing and strategic decisions undertaken within competitive contexts. These studies sought to understand how various marketing mix variables and strategic choices influenced competitive outcomes.

Dominique M. Hanssens (1980) pioneered the use of time series analysis to study market response and competitive behavior, providing quantitative methods to assess the impact of competitive actions over time [36]. Jean-Jacques Lambin (1970) and Lambin, Philippe A. Naert, and Alain V. Bultez (1975) offered early insights into advertising's role in competitive behavior and the determination of optimal marketing behavior in oligopolistic markets [51, 52]. M.M. Metwally (1978) investigated "escalation tendencies of advertising," where firms might feel compelled to increase advertising spending in response to rivals, potentially

leading to a competitive arms race [58].

John R. Hauser (1988) and Hauser and Steve M. Shugan (1983) developed influential models for competitive pricing, positioning, and "defensive marketing strategies" [38, 39]. Their "Defender" model provided a framework for incumbents to determine profit-maximizing positions when confronted by new entrants. Hubert Gatignon (1984) studied competition as a moderator of advertising's effect on sales, demonstrating how competitive intensity could influence advertising effectiveness [26]. Gatignon, Barton A. Weitz, and Pradeep Bansal (1990) examined brand introduction strategies and their effectiveness in different competitive environments, highlighting the importance of competitive context in launching new brands [28]. Jan-Benedict E.M. Steenkamp et al. (2005) rigorously analyzed competitive reactions to advertising and promotion attacks, revealing patterns of response to different types of marketing offensives [78].

The concept of competitive reputations and their role in market dynamics was explored by Bruce H. Clark and David B. Montgomery (1998), who discussed how established reputations could serve as an entry deterrence mechanism [15]. Brian T. McCann and Govert Vroom (2010) investigated pricing responses to entry and the effects of "agglomeration" in the hotel market. Their work built upon earlier foundational research in economic geography by Y.Y. Papageorgiou and J.F. Thisse (1985) on agglomeration as spatial interdependence between firms and households [65], and by H.A. Eiselt, Gibert Laporte, and Jacques-François Thisse (1993) on competitive location models [20]. McCann and Vroom's research showed that incumbent pricing responses varied based on the entrant's experience and the capacity added to the market [57].

The existing literature on competitive reactions to agglomeration primarily focuses on pricing as the response variable. However, there's significant potential for marketing research to contribute by exploring other marketing instruments, such as product attributes, service quality, or promotional activities, as competitive responses in spatially concentrated markets. Integrating insights from organizational behavior research, particularly concerning organizational learning and routines [18, 54, 62], would further enrich the understanding of the dynamic competitive rivalry over time.

Contemporary Challenges and Future Directions

In recent years, the field of competitive dynamics has faced the imperative to adapt to and analyze the profound implications of accelerating technological change and the emergence of novel business models. This adaptation is crucial as these forces are fundamentally reshaping the nature of competitive interactions.

The pervasive influence of Digitalization and Artificial Intelligence (AI) is profoundly redefining competitive dynamics. Sebastian Krakowski, Johannes Luger, and Sebastian Raisch (2023) explored AI's role as a changing source of competitive advantage, arguing that the integration of AI capabilities transforms how firms compete [49]. Shirish Sundaresan, Andrew Boysen, and Atul Nerkar (2023) provided empirical insights into incumbent responses to competitors adopting innovation, exemplified by "Dr. Robot" in hospitals, highlighting how organizations serving "easier" needs react faster to innovators, while those serving "complex" needs may delay adoption to maintain a perception of being innovators themselves [79]. This signals a burgeoning interest in understanding how AI-driven capabilities and decisions influence competitive interactions, ranging from automated, real-time pricing adjustments (e.g., discussions around "surge pricing" in the fast-food industry, as exemplified by Wendy's [43]) to sophisticated market sensing, rapid product analysis, reverse-engineering of competitive offerings, and lightning-fast response mechanisms. The core research questions here revolve around whether AI leads to hyper-competition or new forms of tacit collusion, its impact on barriers to entry, and how it affects the speed and effectiveness of competitive reactions.

The proliferation of platform ecosystems represents another critical area of contemporary competitive analysis. Tobias Kretschmer et al. (2022) conceptualized platform ecosystems as "meta-organizations," frameworks that facilitate interactions among multiple independent entities [50]. Their work highlights the implications of this organizational form for platform strategies, emphasizing that competition increasingly occurs not merely between individual firms, but between entire interconnected ecosystems (e.g., Apple iOS vs. Google Android). Geoffrey Parker and Marshall Van Alstyne (2025) further delve into the dynamics of innovation, openness, and platform control within these new competitive arenas [66]. These studies underscore that platform-based competition introduces new layers of complexity, as firms must manage relationships within their own ecosystem while simultaneously competing against rival ecosystems.

Behavioral and cognitive aspects continue to gain substantial prominence, offering deeper insights into the micro-foundations of competitive decisions. B. Levitt and J.G. March (1988) contributed significantly to organizational learning theory, which provides a framework for understanding how firms adapt their competitive strategies over time through experience and feedback loops [54]. Jukka Luoma et al. (2018) explored the cognitive mechanisms that drive incumbent firms' responses to low-price market entry strategies, revealing the psychological factors that influence competitive reactions [56]. Wei Guo, Tieying Yu, and Javier Gimeno (2017) examined the intriguing role of language and communication vagueness in market entry decisions, suggesting that deliberate ambiguity can be a strategic tool to deter rivals [35]. Most recently, Liisa Välikangas, Eero

Vaara, and Inês Peixoto (2024) introduced the concept of "temporal intentionality," highlighting how time-related deliberations and perceived time horizons profoundly influence strategic actions and competitive responses [83].

The phenomenon of shrinking product lifecycles [48] further intensifies competitive pressures across nearly all industries. This necessitates not only faster product development but also more agile and responsive competitive strategies. The increasing interconnectedness of global markets, evident in widespread global sourcing trends [14], means that competitive interactions are no longer confined to local or national boundaries; competition is inherently global. Companies like Thomson Reuters are continually evolving their competitive data offerings [81], reflecting the critical need for timely and accurate market intelligence in a fast-paced environment. News reports, such as those detailing airline price increases [61] or new technological announcements [11], consistently underscore the constant flow of competitive information and the rapid-fire reactions required to maintain relevance and market position.

Julian Birkinshaw (2022) provides critical insights into how incumbent firms adapt to survive and thrive amidst these dynamic and disruptive environments. His work emphasizes the importance of strategic agility, continuous innovation, and the ability to reinvent business models [9]. James F. Moore (1993) introduced the concept of "Predators and Prey," framing competition within an ecological perspective that highlights co-evolution and adaptation within a broader business ecosystem [59]. This view emphasizes that firms are interdependent and evolve alongside their rivals and the environment. Oliver Williamson's extensive body of work on transaction cost economics (1975, 1983, 1985, 1996) also provided a robust theoretical lens for understanding interfirm relations, including the formation and governance of joint ventures [86, 84, 87, 85]. Jean-François Hennart (1988) specifically applied transaction cost theory to equity joint ventures [42]. Erin Anderson and Hubert Gatignon (1986, 2005) further utilized transaction cost analysis to explain modes of foreign market entry and the complex processes involved in the creation of entirely new markets [2, 3]. David J. Teece (1996) forged explicit links between firm organization, industrial structure, and technological innovation, showing how these elements jointly shape competitive capabilities [80]. James H. Love, Stephen Roper, and Prit Vahter (2014) explored the phenomenon of "learning from openness," examining the dynamics of breadth in external innovation linkages and how firms benefit from collaborating with external partners [55]. Finally, Hubert Gatignon et al. (2002) proposed a structural approach to assessing innovation, developing concrete constructs for innovation locus, type, and characteristics, providing a more granular understanding of different forms of innovation and their competitive implications [29].

Competitor Alliances

Alliances, defined as formal agreements between organizations, represent a crucial dimension of modern competitive strategy, often serving as both a competitive reaction and a proactive strategic choice. These arrangements can take various forms, broadly categorized as "horizontal" or "vertical." Horizontal alliances typically involve competitors aligning for shared objectives, such as achieving broader international market reach or pooling resources to accelerate innovation outcomes. Vertical alliances, in contrast, occur across different levels of a supply chain or within an ecosystem, often under the leadership of a "platform provider" [59].

The platform ecosystem model has become a dominant organizational form over the past two decades, particularly with the rapid diffusion of digital technologies across numerous industries [50]. This model is characterized by multiple independent companies aligning and collaborating under the stewardship of a central platform provider. This provider acts as the strategic node, defining the overall direction and providing a common technical infrastructure. The objective is to create a synergetic network that offers unique value propositions for consumers and benefits all participating companies. Prominent examples include the Apple App Store, which connects developers, content creators, and consumers; Spotify, linking artists, advertisers, and listeners; or Tencent, which seamlessly integrates social media (WeChat) with payment systems, livestream commerce, and gaming within a unified structure. These platform alliances, in essence, provide a layer of protection from traditional competition, shifting the intensity of rivalry from individual company level to the platform level (e.g., Apple iOS vs. Google Android, or Amazon's e-commerce system vs. Alibaba).

The accelerating pace of technological progress has rendered most industries increasingly complex and sophisticated. Industries such as pharmaceuticals, telecommunications, and even traditional sectors like automotive have been transformed by robotization, advanced electronics, electric vehicle technology, and online sales channels. Similarly, the retail industry has undergone a radical shift with the widespread adoption of e-commerce, livestream commerce, and rapid home delivery services, fundamentally altering consumer shopping behavior. In this highly complex environment, a single firm, regardless of its size, can rarely master all the requisite knowledge and skills to anticipate market needs and evolutions autonomously. This reality creates a strong incentive for firms to develop multiple alliances to increase potential payoffs and mitigate the inherent uncertainties of innovation activity [55].

Firms, therefore, may align with a diverse set of competitors or non-competitors, each contributing different assets under a platform company umbrella, or

seek out bilateral agreements with individual entities. In retail, for instance, brands leverage platform companies like Shopify for their online presence, Stripe for payment systems, and Trove for resale-as-a-service (RaaS) solutions. These platform providers offer their services to numerous competitors both domestically and internationally. In the pharmaceutical sector, companies often license drugs to competitors while still under patent, maximizing sales through multiple salesforces promoting the drug to physicians.

Capron and Mitchell (2012) argue that firms often cannot achieve growth solely through a single partner but must strategically integrate within a broader network of collaborating firms [12]. Such alliance networks frequently involve partners with complementary, yet distinct, know-how—be it technological expertise, access to top talent, or crucial relationships necessary for navigating fast-changing industries. However, alliances among direct competitors present unique challenges, largely due to inherently lower levels of trust between partners, as observed in R&D alliances where horizontal collaborations foster less cooperation than vertical ones [67]. Nevertheless, research suggests that the negative effects of initial lack of trust may be short-term, and trust can indeed develop over time [82].

Greve et al. (2014) identified two generic forms of alliance portfolios: the "hub-and-spoke" model, where a firm has separate alliances with multiple unconnected partners, and the "integrated" configuration, where all partners are interlinked, resembling an ecosystem but not necessarily led by a dominant platform provider [34]. They also noted hybrid configurations combining elements of both.

Regardless of the alliance structure, managing a multiplicity of partners is a non-trivial undertaking. While the motive for forming such alliances is often to leverage diverse skills and knowledge, which can involve hundreds of partners (e.g., Boeing's supply chain), greater heterogeneity often correlates with increased management difficulty. Cui and O'Connor (2012) distinguished between functional diversity (e.g., manufacturing, marketing, R&D components, as seen in new product development teams [37]) and national dispersion (the extent of international partnerships) [17]. They argue that the costs and complexities of managing highly diverse resources can outweigh the benefits when combined with a high heterogeneity of functional activities.

For companies to fully realize the benefits of varied resources available through multiple partnerships, efficient information sharing across organizations is paramount. While this presents significant challenges, the management of these alliances must continuously adapt. For example, supply chain alliances have evolved from pure global sourcing tasks to complex coordination and management of entire supply chains [14]. In all such processes, robust information technology is critical for supporting seamless linkages among alliance members.

Given these inherent difficulties, careful partner selection, especially when competitors are involved, is crucial. The alliance literature has identified several key criteria for partner choice:

- Weighting Relational Embeddedness and Knowledge Redundancy: Partner selection is often rooted in the concept of social capital—the quantity and quality of interactions within a social network. The knowledge built and shared through these networks is a source of economic value. Complementary knowledge among partners enhances network value, particularly as new knowledge is discovered and disseminated. Research on R&D partnerships by Rindfleisch and Moorman (2001) showed that both relational embeddedness and knowledge redundancy (overlap in existing knowledge) influence new product creativity and development speed. Relational embeddedness aids in acquiring product information, while knowledge redundancy can negatively affect the acquisition of process information [68]. Similarly, Wuyts et al. (2004) found that while technological diversity in alliance portfolios can increase radical and incremental innovation, this effect is contingent on partners' ability and motivation to share information. Moderate levels of diversity are often optimal, as too little diversity may lead to a lack of motivation to share, and too much can make sharing difficult [88, 73].

- Size Asymmetry: Alliances involving partners of significantly different sizes raise concerns rooted in institutional economics and the concept of opportunism [86, 87]. Smaller partners often fear absorption by larger ones, and equity investments are sometimes used to mitigate opportunistic behaviors, especially when transaction-specific assets are involved [42]. Capron and Mitchell (2012) highlighted the risk that a larger partner might undertake activities that directly compete with a smaller, dependent partner, leading to a sense of exploitation [12]. They advocate for alliances characterized by a balance in resource contributions.

- Organizational Fit: Given the extensive coordination required in alliances, often involving "soft" skills, partners must share fundamental elements of organizational culture [34]. Divergences in organizational processes, systems, and procedures can negatively impact alliance coordination. Differences in competitors' organizational cultures may offer a fertile ground for research to explain performance discrepancies and their influence on alliance formation among rivals.

- Compatibility of Goals: A critical determinant of alliance success is the compatibility of partner goals [34]. This can be particularly challenging among competitors who inherently share common, often conflicting, objectives. Finding the right balance may be easier in situations where mutual interdependence (each partner holding the other "hostage" for resources) prevents

opportunistic behavior and fosters trust [76]. Such situations are less feared when partners possess differentiated and complementary resources. The intended long-term duration of the relationship is also a significant consideration, as long-term relationships necessitate adaptable processes for managing evolving partnership goals [12].

The complexities of international partnerships, including geopolitical factors, have been widely studied in international business literature [2, 3]. In the current decade, geopolitical considerations have gained new urgency, driven by global searches for materials (e.g., lithium demand) and talent (e.g., competition for IIT graduates in India). Supply chain risks, exemplified by companies like Apple diversifying beyond China to India and Vietnam, underscore the growing importance of geopolitics in alliance strategy. Furthermore, functional diversity within an alliance can be challenging, as the costs and difficulties of managing highly diverse resources may outweigh the benefits if combined with high heterogeneity of functional activities [17]. Experience in such partnerships becomes critical, and longitudinal studies examining how trust improves in partnerships with competitors are much needed, drawing on rich datasets like the Thompson Reuters Recap database for the biopharmaceutical industry [81].

This leads to several critical research questions concerning competitor alliances:

- What generalizations can be offered about the success factors that empower platform ecosystems, and under what specific conditions should a firm pursue a platform-based ecosystem structure?
- How often are horizontal R&D alliances truly successful, and what are the key determinants of that success?
- Under what conditions is it strategically imperative for firms to develop multiple partners rather than focusing on one dominant partner?
- Are international alliances or domestic alliances generally more successful, and under what conditions does one outperform the other?
- What are the precise conditions that determine which form of alliance is more successful: hub-and-spoke or integrated configurations?
- What specific strategies are most appropriate and effective when managing alliances that explicitly include direct competitors?
- Are there particular types of geopolitical risks that a firm might be willing to embrace, and under what conditions would such a risk be strategically acceptable?
- Is there a discernible correlation between moderate levels of alliance partner diversity and greater alliance success, and if so, what mechanisms explain this relationship?
- Is relational embeddedness among firms consistently associated with greater success in R&D alliances, and how does this dynamic evolve over time?
- Is size asymmetry between firms reliably correlated with a lack of success for horizontal alliances, and what mitigating strategies can overcome this?
- Is alliance success correlated with a similarity of information systems and processes among partners, and how do firms manage technological integration challenges?
- When is goal compatibility an antecedent (a prerequisite) for alliance formation, and when does it emerge as a consequence (an outcome of successful collaboration)?
- Under what specific conditions and over what time horizons does trust among partners in an alliance genuinely increase, especially when those partners are competitors?

Competitor Networks

Beyond formal alliances, the concept of competitor networks offers another crucial lens through which to understand interfirm rivalry. This perspective posits that a firm cannot operate in isolation but is inextricably embedded within a broader network of organizations through various linkages—upstream, downstream, lateral, and horizontal [80]. Unlike alliances, which are typically constrained by formal agreements and defined objectives, competitor networks often involve informal, recurring interactions based on ongoing professional and social relationships among individuals within different organizations [24, 33]. These informal ties can develop intentionally, as when firms encourage participation in industry events like trade shows, or inadvertently, through personal connections that individuals cultivate. Ronald S. Burt's (1995) work on "structural holes" highlights how competitive advantage can arise from occupying a position that bridges disconnected parts of a network, facilitating unique information flow [10].

A key distinction in network theory is between open and closed networks. An open network exists when a firm has direct links to several partners who do not have direct contacts among themselves. In contrast, in a closed network, all partners are closely linked to each other, forming a tight-knit cluster. Interestingly, strong ties are not always a prerequisite for effective information flow; Mark S. Granovetter’s (1973) concept of "the strength of weak ties" demonstrated that loose, informal connections can be highly effective in disseminating novel information and opportunities [32]. Therefore, open networks may be surprisingly efficient for knowledge acquisition from competitors, offering greater flexibility for firms to exchange information with the most relevant members. Geoffrey Parker and Marshall Van Alstyne (2025) cite the intriguing speculation that an open network was a key factor in Facebook's success, whereas a more closed

network contributed to MySpace's ultimate decline, illustrating the competitive implications of network structure [66].

Significant developments in competitor networks research concern regional clusters, which are networks concentrated within a specific, often geographically constrained, area, embodying an "agglomeration effect." These clusters are frequently observed in entrepreneurship, such as Silicon Valley, where a concentration of competing firms provides opportunities for developing ties essential for acquiring complementary knowledge and fostering creativity. These environments facilitate "open innovation," where ideas and knowledge are shared more freely. While geographical proximity is a clear facilitator, the proliferation of advanced communication technologies—such as email, video conferencing, and collaborative online platforms—has challenged the assumption that face-to-face communication is strictly necessary for strong ties to develop [25]. In fact, these virtual communication methods can lead to increased creativity and faster new product development.

For network members to truly benefit, a certain degree of involvement is required to ensure information sharing. Crucially, this information must not only be shared but also effectively assimilated and disseminated within the recipient organizations. These assimilation and dissemination processes do not materialize instantly; they develop and evolve over time. James H. Love, Stephen Roper, and Prit Vahter (2014) conducted research on Irish manufacturing plants, concluding that firms learn more effectively from openness when they possess prior innovation linkages [55]. Their findings strongly support the hypothesis that firms with pre-existing innovation relationships experience higher innovation returns from network participation. The implementation and management of such complex systems are undoubtedly challenging, especially when direct competitors are involved. Given the temporal nature of these phenomena, future research must continue to address them through longitudinal studies. While such research, from data collection to rigorous empirical analysis, is inherently challenging, it is critically needed to advance our understanding in this vital field of competitive strategy.

This leads to several critical research questions concerning competitor networks:

- Under what conditions are open networks consistently capable of facilitating greater knowledge acquisition and competitive intelligence compared to closed networks, and how does this vary across industries or competitive contexts?
- Is the learning effect derived from network participation sustainable over time, or does it diminish, and what factors contribute to its decay or persistence?
- Under what specific conditions can virtual forms of communication (e.g., video conferencing, collaborative platforms) be as effective, or even more effective, than face-to-face communication in facilitating knowledge exchange within competitor networks?
- Over what temporal dynamics is knowledge exchange maximized within a competitive network, and how can firms strategically manage the timing and intensity of their network engagements to optimize knowledge flow?

DISCUSSION

The intellectual trajectory of research on competitive rivalry unequivocally demonstrates a profound and continuous journey. It has evolved from rudimentary, often simplistic, economic models focused on static market structures to highly intricate, multidisciplinary frameworks that capture the dynamic and complex nature of interfirm interactions. Initially, the analytical lens was largely confined to understanding immediate price or quantity responses in oligopolistic markets. However, the pivotal introduction of behavioral theories marked a critical turning point, acknowledging the crucial roles of cognitive processes, organizational learning, and internal decision-making heuristics in shaping how firms perceive, interpret, and react to competitive threats. This foundational shift paved the way for the robust development of competitive dynamics as a dedicated and influential field, with concepts like multimarket contact and mutual forbearance emerging as central tenets that explain strategic interdependence across diverse markets.

The persistent expansion of competitive dynamics research reflects a growing and sophisticated appreciation for the intricate interconnectedness of firms within broader business ecosystems. The seamless integration of concepts from innovation studies, sophisticated network theory, and strategic alliance management has immeasurably enriched our understanding of how competitive advantage is not solely built and sustained through direct confrontations. Instead, it is increasingly forged through collaborative endeavors, efficient knowledge flows, and strategic positioning within complex, often fluid, inter-firm relationships. The notable shift from a narrow, dyadic view of competition (firm A vs. firm B) to a more systemic perspective, which embraces entire value chains, dynamic platform ecosystems, and even the "social structure of competition" exemplified by concepts like "structural holes" [10], vividly highlights the escalating sophistication and intellectual breadth of the field.

Looking ahead, several critical frontiers demand deeper attention and rigorous inquiry. The accelerating pace of technological change, particularly the pervasive and transformative influence of artificial intelligence (AI) and advanced analytics, will continue to profoundly redefine competitive interactions. AI-driven decision-making processes, advanced predictive analytics, and automated response systems are poised to introduce entirely new

forms of competitive intelligence, operational swiftness, and strategic agility. This paradigm shift could potentially lead to intensified hypercompetition or, conversely, foster entirely novel forms of strategic collaboration. Future research in this domain urgently needs to explore the ethical implications, transparency challenges, and the potential for algorithmic collusion in such increasingly automated competitive environments.

Furthermore, the evolving nature of global competition, characterized by escalating geopolitical complexities, fragmented regulatory landscapes, and diverse cultural contexts, necessitates more context-specific and cross-cultural studies of competitive rivalry. The nuanced role of language and cultural interpretation in competitive communication [35] represents an area with immense untapped potential for research. Understanding how signals are sent, received, and interpreted across different cultural and linguistic boundaries will be crucial.

Finally, while significant progress has been achieved in comprehending the observable actions and reactions of firms, there remains a pressing need for deeper dives into the micro-level cognitive processes of strategic decision-makers. Further inquiry into the precise role of organizational routines in shaping rapid and effective responses, and the dynamic interplay between technological and organizational adaptation in ever-intensifying competitive contexts, represent exceptionally fruitful avenues for future inquiry. The field of competitive dynamics must remain committed to embracing interdisciplinary approaches, drawing insights from economics, psychology, sociology, and computer science, to fully capture the multifaceted and continuously evolving nature of competitive rivalry in the 21st century.

REFERENCES

1. Alexander, Donald L., 1985. An empirical test of the mutual forbearance hypothesis: the case of bank holding companies. South. J. Econ. 52, 122–140.

2. Anderson, Erin, Gatignon, Hubert, 1986. Modes of foreign entry: a transaction cost analysis and propositions. J. Int. Bus. Stud. 17 (3), 1–26.

3. Anderson, Erin, Gatignon, Hubert, 2005. Firms and the creation of new markets. In: M´enard, Claude, Shirley, Mary M. (Eds.), Handbook of New Institutional Economics. Springer, Berlin, pp. 401–432.b. Chapter 6.

4. Anderson, Philip, Tushman, Michael L., 1990. Technological discontinuities and dominant designs: a cyclical model of technological change. Adm. Sci. Q. 35 (4), 604–633 (December).

5. Bafera, Julian, Kleinert, Simon, 2023. Signaling theory in entrepreneurship research: a systematic review and research agenda. Entrep. Theory Pract. 47 (6), 2419–2464.

6. Barley, Stephen R., 1986. Technology as an occasion for structuring. Adm. Sci. Q. 31, 78–108.

7. Baum, Joel A.C., Korn, Helaine J., 1996. Competitive dynamics of interfirm rivalry. Acad. Manag. J. 39 (2), 259–291.

8. Baum, Joel A.C., Korn, Helaine J., 1999. Dynamics of dyadic competitive interactions. Strateg. Manag. J. 20 (3), 251–278.

9. Birkinshaw, Julian, 2022. How incumbents survive and thrive. Harv. Bus. Rev. JanuaryFebruary, 3-8.

10. Burt, Ronald S., 1995. Structural holes: the social structure of competition. Harvard University Press,, Cambridge, MA.

11. Business of Fashion Digest, Meta Announcement, 9/2/2013.

12. Capron, Laurence, Mitchell, Will, 2012. Build, Borrow, or Buy: Solving the Growth Dilemma. Havard Business Press Books,, Boston, MA.

13. Carpenter, Gregory S., Nakamoto, Kent, 1989. Consumer preference formation and pioneer advantage. J. Mark. Res. 26, 285–298 (August).

14. Chung, Walter W.C.C., Yam, Anthony Y.K.K., Chan, Michael F.S.S., 2004. Networked enterprise: a new business model for global sourcing. Int. J. Prod. Econ. 87 (3), 267–280.

15. Clark, Bruce H., Montgomery, David B., 1998. Competitive reputations, multimarket competition and entry deterrence. J. Strateg. Mark. 6, 81–96.

16. Connelly, Brian L., Certo, S.Trevis, Ireland, R.Duane, Rentzel, Chirstopher R., 2011. Signaling theory: a review and assessment. J. Manag. 37 (1), 39–67.

17. Cui, Anna S., O'Connor, Gina, 2012. Alliance portfolio resource diversity and firm innovation. J. Mark. 76 (4), 24–43.

18. Cyert, R.M., March, J.G., 1963. A Behavioral Theory of the Firm. Prentice Hall,, Englewood Cliffs, NJ.

19. Edwards, Corwin, 1955. Conglomerate bigness as a source of power. In: Stigler, George (Ed.), Business Concentration and Price Policy. Princeton University Press, Princeton, pp. 331–359.

20. Eiselt, H.A., Laporte, Gibert, Thisse, Jacques-François, 1993. Competitive location models: a framework and bibliography. Transp. Sci. 27 (1), 44–54 (February).

21. Feinberg, Robert M., 1984. Mutual forbearance as an extension of oligopoly theory. J. Econ. Bus. 36 (2), 243–249.

22. Feinberg, Robert M., 1985. Sales-at-risk: a test of the mutual forbearance theory of conglomerate

behavior. J. Bus. 58, 225–241.

23. Financial Times, Super Jumbo Demand, September 3, 1996.

24. Fombrun, C.J., 1982. Strategies for network research in organization. Acad. Manag. Rev. 7 (2), 280–291.

25. Ganesan, Shankar, Malter, Alan J., Rindfleisch, Aric, 2005. Does distance still matter? Geographic proximity and new product development. J. Mark. 69 (4), 44–60.

26. Gatignon, Hubert, 1984. Competition as a moderator of the effect of advertising on sales. J. Mark. Res. 21 (4), 387–398.

27. Gatignon, Hubert, Anderson, Erin, Helsen, Kristiaan, 1989. Competitive reactions to market entry: explaining interfirm differences. J. Mark. Res. 26 (1), 44–55.

28. Gatignon, Hubert, Weitz, Barton A., Bansal, Pradeep, 1990. Brand introduction strategies and competitive environments. J. Mark. Res. 27 (4), 390–401.

29. Gatignon, Hubert, Tushman, Michael L., Smith, Wendy, Anderson, Philip, 2002. A structural approach to assessing innovation: construct development of innovation locus, type, and characteristics. Manag. Sci. 48 (9), 1103–1122 (September).

30. Gimeno, Javier, 1999. Reciprocal threats in multimarket rivalry: staking out 'spheres of influence' in the U.S. airline industry. Strateg. Manag. J. 20 (2), 101–128.

31. Gimeno, Javier, Woo, Carolyne Y., 1999. Multimarket contact, economies of scope, and firm performance. Acad. Manag. J. 43 (3), 239–259.

32. Granovetter, Mark S., 1973. The strength of weak ties. Am. J. Sociol. 78 (6), 1360–1380.

33. Granovetter, Mark S., 1983. The strength of weak ties: a network theory revisited. Sociol. Theory 1, 201–233.

34. Greve, Henrich, Rowley, Tim, Shipilov, Andrew, 2014. Network Advantage: How to Unlock Value from Your Alliances and Partnerships. John Wiley & Sons,, San Francisco, CA.

35. Guo, Wei, Yu, Tieying, Gimeno, Javier, 2017. Language and competition: communication vagueness, interpretation difficulties and market entry. Acad. Manag. J. 60 (6), 2073–2098.0.

36. Hanssens, Dominique M., 1980. Market response, competitive behavior, and time series analysis. J. Mark. Res. 17, 470–485 (November).

37. Haon, Christophe, Gotteland, David, Fornerino, Marianela, 2009. Familiarity and competence diversity in new product development teams: effects on new product performance. Mark. Lett. 20 (1), 75–89.

38. Hauser, John R., 1988. Competitive price and positioning strategies. Mark. Sci. 7 (1), 76–91.

39. Hauser, John R., Shugan, Steve M., 1983. Defensive marketing strategies. Mark. Sci. 2 (4), 319–360.

40. Heggestad, A.A., Rhoades, S.A., 1978. Multimarket interdependance and local market competition in banking. Rev. Econ. Stat. 60, 523–532.

41. Heil, Oliver, Robertson, Thomas S., 1991. Toward a theory of competitive market signaling: a research agenda. Strateg. Manag. J. 12, 403–418.

42. Hennart, Jean-François, 1988. A transaction costs theory of equity joint ventures. Strateg. Manag. J. 9 (4), 361–374.

43. Hernandez, Joe (2024). No, Wendy's Says It Isn't Planning to Introduce Surge Pricing, NPR, February 28.

44. Horvath, ´ Csilla, Peter, S.H.Leeflang, Jaap, E.Wieringa, Dick, R.Wittink, 2005. Competitive reaction- and feedback effects based on VARX models of pooled store data. Int. J. Res. Mark. 22 (4), 415–426.

45. Hotelling, Harold, 1929. Stability in competition. Econ. J. 39, 41–57.

46. Jayachandran, Satish, Gimeno, Javier, Varadarajan, P.Rajan, 1999. The theory of multimarket competition: a synthesis and implications for marketing strategy. J. Mark. 63 (July), 49–66.

47. Kang, W., Bayus, B.L., Balasubramanian, S., 2010. The strategic effects of multimarket contact: mutual forbearance and competitive response in the personal computer industry. J. Mark. Res. 47, 415–427.

48. Koenig, Steve (2023), Product Lifecycles Shrinking, 〈www.cta.tech/resources〉.

49. Krakowski, Sebastian, Luger, Johannes, Raisch, Sebastian, 2023. Artificial intelligence and the changing source of competitive advantage. Strateg. Manag. Rev. 44 (6), 1425–1452.

50. Kretschmer, Tobias, Leiponen, Aija, Schilling, Melissa, Vasudeva, Gurneeta, 2022. Platform ecosystems as meta-organizations: implications for platform strategies. Strateg. Manag. J. 43, 405–424.

51. Lambin, Jean-Jacques, 1970. Advertising and competitive behavior: a case study. Appl. Econ. 2 (4 (January)), 231–251.

52. Lambin, Jean-Jacques, Naert, Philippe A., Bultez,

Alain V., 1975. Optimal marketing behavior in oligopoly. Eur. Econ. Rev. 6 (2), 105–128.

53. Landau, Ralph, 1984. The Nature of Technological Knowledge. D. Reidel,, Boston.

54. Levitt, B., March, J.G., 1988. Organizational learning. Annu. Rev. Sociol. 14, 319–340.

55. Love, James H., Roper, Stephen, Vahter, Prit, 2014. Learning from openness: the dynamics of breadth in external innovation linkages. Strateg. Manag. J. 35 (11), 1703–1716.

56. Luoma, Jukka, et al., 2018. Big splash, no waves? Cognitive mechanisms driving incumbent firms' responses to low price market entry strategies. Strateg. Manag. J. 39 (5), 1388–1410.

57. McCann, Brian T., Vroom, Govert, 2010. Pricing response to entry and agglomeration effects. Strateg. Manag. J. 31 (3 (March)), 284–305.

58. Metwally, M.M., 1978. Escalation tendencies of advertising. Oxf. Bull. Stat. 40 (2), 153–163.

59. Moore, James F., 1993. "Predators and prey: a new ecology of competition. Harv. Bus. Rev., May-June 75–86.

60. Nadkarni, Sucheta, Pan, Lingling, Chen, Tianxu, 2019. Only timeline will tell: temporal framing of competitive announcements and rivals' responses. Acad. Manag. J. 62 (1), 117–143.

61. NBC News (2013). Airline Price Increases, December 11.

62. Nelson, R.R., Winter, S.G., 1982. An evolutionary theory of economic change. Harvard University Press,, Cambridge, MA.

63. Ofek, Elie, Turut, Ozge, ¨ 2013. Vaporware, suddenware, and trueware: new product preannouncements under market uncertainty. Mark. Sci. 32 (2), 342–355.

64. Ozalp, Hakan, Eggers, J.P., Malerba, Franco, 2023. Hitting reset: industry evolution, generational tehcnology cycles, and the dynamic value of firm experience. Strateg. Manag. J. 44, 1292–1327.

65. Papageorgiou, Y.Y., Thisse, J.F., 1985. Agglomeration as spatial interdependence between firms and households. J. Econ. Theory 37, 19–31.

66. Parker, Geoffrey, Van Alstyne, Marshall, 2025. Innovation, openness, and platform control. Manag. Sci. 64 (7), 3015–3032.

67. Rindfleisch, Aric, 2000. Organizational trust and interfirm cooperation: an examination of horizontal versus vertical alliances. Mark. Lett. 11 (1), 81–95.

68. Rindfleisch, Aric, Moorman, Christine, 2001. The acquisition and utilization of information in new product alliances: a strength-of-ties perspective. J. Mark. 65 (2), 1–18.

69. Robertson, Thomas S., Gatignon, Hubert, 1991. How innovators thwart new entrants into their markets. Plan. Rev. 19 (5), 4–11.

70. Robertson, Thomas S., Eliashberg, Jehoshua, Rymon, Talia, 1995. New product announcement signals and incumbent reactions. J. Mark. 59 (3), 1–15 (July).

71. Ryan-Charleton, Tadhg, Galavan, Robert J., 2024. Multimarket contact between partners and strategic alliance survival. Strateg. Manag. Rev. 45 (10), 1988–2017.

72. Ryu, Wonsang, Reuer, Jeffrey J., Brush, Thomas H., 2020. The effects of multimarket contact on partner selection for technology cooperation. Strateg. Manag. J. 41 (2), 267–289.

73. Sampson, Rachelle, 2007. R&D Alliances and Firm Performance: the Impact of Technological Diversity and Alliance Organization on Innovation. Acad. Manag. J. 50 (2), 364–386.

74. Schumpeter, Joseph A., 1950. Capitalism, Socialism, and Democracy, 3d ed..,. Harper and Brothers,, New York, p. 1942.

75. Shankar, Venkatesh, 1999. New product introduction and incumbent response strategies: their interrelationships and the role of multimarket contact. J. Mark. Res. 36, 327–344 (August).

76. Sivadas, Eugene, Dwyer, R.Robert, 2000. An examination of organizational factors influencing new product success in internal and alliance-based processes. J. Mark. 64 (1), 31–49.

77. Spence, Michael, 1973. Job market signaling. Q. J. Econ. 87 (3), 355–374.

78. Steenkamp, Jan-Benedict E.M., Nijs, Vincent R., Hanssens, Dominique M., Dekimpe, Marnik G., 2005. Competitive reactions to advertising and promotion attacks. Mark. Sci. 24 (1), 35–54.

79. Sundaresan, Shirish, Boysen, Andrew, Nerkar, Atul, 2023. Adopting Dr. Robot: responses to competitor adoption of innovation. Strateg. Manag. Rev. 44 (9), 2283–2310.

80. Teece, David J., 1996. Firm organization, industrial structure, and technological innovation. J. Econ. Behav. Organ. 31, 193–224.

81. Thompson Reuters Recap, 〈 https://tracxn.com/d/companies/thomson-reuters-recap/__260_qZdEaiyT-1lKptctHkOpMD1pC_9liYUHPZtJDz0〉, 12/11/24.

82. Un, C.Annique, Alvaro, Cuervo-Cazurra, Kazuhiro, Asakawa, 2010. R&D collaborations and product innovation. J. Prod. Innov. Manag. 27 (5), 673–689.

83. Valikanas, ¨ Liisa, Eero, Vaara, Inês, Peixoto, 2024. Temporal intentionality: prompting time-related deliberations in strategic action. Acad. Manag. 10 (4), 521–526.

84. Williamson, Oliver, 1983. Credible commitments: using hostages to support exchange. Am. Econ. Rev. 73 (4), 519–540.

85. Williamson, Oliver, 1996. The Mechanisms of Governance. Oxford University Press,, New York.

86. Williamson, Oliver E., 1975. Markets and Hierarchies. Free Press,, New York, NY.

87. Williamson, Oliver E., 1985. The Economic Institutions of Capitalism. Free Press,, New York, NY.

88. Wuyts, Stefan, Dutta, Shantanu, Stefan, Stemersch, 2004. Portfolios of interfirm agreements in technology-intensive markets: consequences for innovation and profitability. J. Mark. 68 (2), 88–100.

89. Yu, Tieying, Cannella Jr., Albert A., 2013. A comprehensive review of multimarket competition research. J. Manag. 39 (1), 76–109.