

A Regulatory focus approach to partnering strategy choices in new product development alliances

Article

Published Version

Creative Commons: Attribution 4.0 (CC-BY)

Open Access

Martínez-Noya, A., García-Canal, E. and Narula, R. ORCID: <https://orcid.org/0000-0002-4266-2681> (2025) A Regulatory focus approach to partnering strategy choices in new product development alliances. *Journal of Industrial and Business Economics*. ISSN 1972-4977 doi: 10.1007/s40812-025-00371-2 Available at <https://centaur.reading.ac.uk/123901/>

It is advisable to refer to the publisher's version if you intend to cite from the work. See [Guidance on citing](#).

To link to this article DOI: <http://dx.doi.org/10.1007/s40812-025-00371-2>

Publisher: Springer

All outputs in CentAUR are protected by Intellectual Property Rights law, including copyright law. Copyright and IPR is retained by the creators or other copyright holders. Terms and conditions for use of this material are defined in the [End User Agreement](#).

www.reading.ac.uk/centaur

CentAUR

Central Archive at the University of Reading

Reading's research outputs online



A regulatory focus approach to partnering strategy choices in new product development alliances

Andrea Martínez-Noya¹ · Esteban García-Canal¹ · Rajneesh Narula² 

Received: 16 November 2024 / Revised: 6 July 2025 / Accepted: 24 July 2025
© The Author(s) 2025

Abstract

When forming new product development alliances, firms often face a strategic dilemma: should they partner with a familiar entity within their network, or collaborate with a ‘stranger’ who appears to possess better suited technological capabilities for the new project? Additionally, they must decide whether to maintain a high degree of bandwidth, i.e. information openness, within the alliance. These two interrelated decisions significantly shape firms’ innovation outcomes. Theoretically, the optimal approach is to engage in a high-bandwidth alliance with the technologically superior stranger, maximizing potential benefits. However, in practice, firms frequently make suboptimal choices, either by showing overreliance on familiar partners, or by opting for narrow-bandwidth collaborations with strangers. To explain when and why these deviations occur, we integrate regulatory focus theory and managerial perspectives on risk-taking with the relational view of alliances. We argue that partner and bandwidth decisions are shaped by how managers frame strategic choices. Industry leaders typically adopt prevention-focused strategies, reinforcing inertia and risk aversion, while challengers pursue promotion-focused strategies that embrace novelty and change. Our behavioral framework advances alliance formation theory by highlighting the role of managerial cognition and decision framing. These insights are particularly relevant as firms face growing uncertainty and rapid technological change.

Keywords Strategic alliances · Partner selection · Regulatory focus theory · Cognitive biases · Paradox of openness · Bandwidth · Networks · Collaboration · Innovation

JEL Classification O32 · O33 · O34 · O36

Extended author information available on the last page of the article

1 Introduction

New product development (NPD) alliances refer to both formal and informal cooperative agreements focused on the joint creation and/or commercialization of new products (Prange et al., 2015). These partnerships can take the form of horizontal alliances, which facilitate exploration and innovation opportunities, or vertical alliances, which often support related diversification and improve efficiency within the supply chain (Kotabe & Swan, 1995). Previous research has shown that in the decision to ally with other firms for NPD, firms face what is called the paradox of openness (Laursen & Salter, 2014, 2023; Arora et al., 2016), as collaborating with an external partner may increase the potential success of the project but also the risk of proprietary knowledge leakage (Colombo et al., 2023). Consistent with the relational view of strategic alliances (Dyer & Singh, 1998; Madhok & Tallman, 1998; Mesquita et al., 2008), firms typically address this paradox by collaborating with known partners in NPD alliances rather than engaging with unfamiliar firms, even when pursuing radical innovation projects (Li et al., 2008), thus foregoing the potential benefits of exposure to novel information and technological knowledge (Uzzi, 1996, 1997). This preference arises from the ability to leverage established trust and relationship-specific investments to mitigate the risks of opportunistic behavior by new partners (Ariño et al., 2001; Bureth et al., 1997). However, while trust is undoubtedly important, the default preference for familiar partners over new ones in these alliances may not always be optimal (Bunduchi, 2013; Klueter & Monteiro, 2017; Klueter et al., 2025; Laursen, 2012; Martínez-Noya & Narula, 2018) but may instead reflect a deviation from fully rational decision making. Kavusan and Frankort (2019) show that firms tend to maintain their alliance portfolios unless performance feedback prompts changes, either due to negative performance or the availability of slack resources. Similar findings have been observed in studies examining the influence of performance feedback on the formation of technological alliances with new types of partners (Tyler & Caner, 2016; Martínez-Noya & García-Canal, 2021). However, focusing solely on the trade-off between familiar and unfamiliar partners as a simple dilemma shaped by performance feedback may not fully capture the complexities of partnering strategies in NPD alliances. Firms may also choose to mitigate the risks of opportunistic behavior by reducing their alliance transparency or bandwidth, that is, the amount of information transferred to the partner (Larsson et al., 1998). This, too, is a decision that is not fully rational, as reducing bandwidth may protect against information leakage but can also hinder the success of the project (Ritala et al., 2015). However, this aspect has not been sufficiently considered when analyzing the choice between familiar and unfamiliar partners. This is a critical research gap because both trust and transparency are closely linked and should not be examined in isolation.

To address this gap, we complement the relational view of strategic alliances with insights from regulatory focus theory (Das & Kumar, 2011; Gamache et al., 2015, 2020; Higgins, 1998; Johnson et al., 2015; Qian et al., 2023; Scoresby et al., 2021; Weber & Mayer, 2010, 2011) and managerial perspectives on risk-taking (Kahneman & Tversky, 1979, 1984; March & Shapira, 1987; Wiseman & Gomez-Mejia, 1998). While the relational view predicts the dynamics of trust formation well, it overlooks the role of framing in shaping alliance management decisions. We argue that part-

ner choice decisions may be subject to cognitive biases, as firms weigh expected losses differently than gains when faced with risky and uncertain decisions. Regulatory focus theory is particularly well suited for explaining how firms frame partner selection decisions because it distinguishes between two motivational orientations: promotion focus (driven by aspirations and gains) and prevention focus (driven by security and loss avoidance). This theory highlights the importance of the motivation and goal orientation of decision makers (Förster et al., 2001). Thus, unlike other behavioral theories that emphasize heuristics or prior expectations, regulatory focus directly accounts for how firms frame decisions based on strategic goal orientation and risk preferences (Weber & Mayer, 2010).

Taking a regulatory focus perspective, we argue that firms assign different values to alliance alternatives depending on how they frame alliance goals: either as minimum thresholds that must be met (a prevention focus) or as opportunities to be maximized (a promotion focus) (Weber & Mayer, 2010, 2011). Specifically, based on previous research demonstrating that technological leaders and challengers behave differently and follow different competition dynamics when pursuing innovation projects (Arora et al., 2016; Brancati et al., 2022; Cappelli et al., 2023; Giachetti & Torrisi, 2018), we expect industry leaders and challengers to perceive losses and gains from cooperation differently. Leaders aim to preserve the status quo, while challengers seek to reshape the competitive pecking order (Alcácer & Chung, 2007; Giachetti & Li Pira, 2022; Narula & Santangelo, 2009). In other words, leaders are more likely to adopt a prevention focus, reacting more slowly to technological changes than challengers. These differing perspectives shape managerial cognitive biases, influencing partner selection preferences and alliance behavior, particularly in terms of alliance bandwidth.

Our key assertion in this paper is that to more comprehensively explain alliance partner decisions, traditional approaches to alliance formation should be complemented with more realistic approaches to decision making. By integrating regulatory focus theory with traditional perspectives on alliance formation, this paper offers a novel behavioral framework to explain why firms often make seemingly suboptimal partner choices in NPD alliances under competence and behavioral uncertainty. Theoretically, our framework contributes to the literature on alliances, claiming that considering cognitive biases stemming from different regulatory foci (i.e. how decision makers frame the outcome of a decision) becomes key to explaining partner selection choices. Thereby, it is our point that firms' partner selection decisions are influenced not solely by rational assessments of complementary capabilities, but also by how managers perceive and frame risk, uncertainty, and potential gains or losses. This is not simply a conceptual argument, as it has profound practical implications for how managers should negotiate and manage NPD alliances. From a managerial perspective, the paper underscores the importance of recognizing and mitigating cognitive biases in alliance decisions, particularly those stemming from overreliance on familiar partners or fear of disrupting the status quo. We suggest mechanisms, such as contract reframing, team-based decision-making, and leveraging AI tools, to reduce decision biases and improve partner selection outcomes, especially in dynamic, high-uncertainty environments.

2 Trust, relationship development, and partnering strategy dilemmas

2.1 The familiar vs. stranger partner decision: a matter of trust and relational capital

According to the relational view, trust in cooperative relationships is built through relationship-specific investments, i.e. expenditures of money, managerial time, energy, and effort tailored to a particular partner and not transferable elsewhere (Dyer & Singh, 1998; Madhok & Tallman, 1998; Mesquita et al., 2008). These investments enhance coordination, communication, governance, and trust, turning alliances into self-enforcing agreements (Dyer, 1997; Mesquita & Brush, 2008). Accumulated trust and knowledge with a specific partner constitute relational capital—an asset generating rents as long as the relationship is maintained (Dyer & Singh, 1998; Madhok & Tallman, 1998). Consequently, firms often prefer familiar partners over strangers, even when the latter may offer superior resources, to preserve relational capital and avoid the higher monitoring and enforcement costs associated with new partnerships.

This bias primarily stems from the heightened uncertainty involved in partnering with unfamiliar firms. In NPD alliances, collaborating with a new partner introduces uncertainty regarding both the partner's ability to contribute the required external resources and its willingness to fulfill commitments (Madhok & Tallman, 1998). We categorize these two sources of uncertainty as: "competence uncertainty" and "behavioral uncertainty", respectively. Competence uncertainty arises because firms often cannot precisely define or evaluate the complementary technological resources needed without prior collaboration (Hoetker, 2005). Behavioral uncertainty stems from the lack of previous interactions, which raises the risk of opportunistic behavior and unintended knowledge transfers (Grimpe & Kaiser, 2010; Heiman & Nickerson, 2004; Larsson et al., 1998). Thus, the decision between a familiar partner within the firm's R&D network and a stranger involves balancing potential efficiency gains against these uncertainties. Although a stranger may offer superior technological capabilities, the lack of trust increases behavioral uncertainty, necessitating greater monitoring to prevent knowledge leakage and opportunism (Anand & Khanna, 2000; Ariño et al., 2001; Gulati, 1995; Zaheer et al., 1998). In effect, governance costs vary with the nature of the project and tend to increase in exploratory NPD projects, which are characterized by high levels of competence and behavioral uncertainty (Carson et al., 2006). Firms may recognize the need for new capabilities but find it challenging to identify optimal complementary resources. Research shows that as competence uncertainty rises, prior relationships gain importance relative to technical capabilities in facilitating collaboration (Hoetker, 2005). Similarly, absorptive capacity literature indicates that repeated interactions reduce causal ambiguity and improve knowledge transfer effectiveness (Cohen & Levinthal, 1990; Kale et al., 2000; Kogut & Zander, 1992; Mowery et al., 1996; von Hippel, 1994). Therefore, firms often prefer familiar partners under high uncertainty, particularly for radical innovation projects (Li et al., 2008). Additionally, firms embedded in specific organizational networks may hesitate to switch to potentially more valuable but unfamiliar partners.

However, this preference for trusted partners may constrain innovation performance. Overcoming the limitations of contextually localized search is essential for exploratory alliances to access novel resources (Klueter et al., 2025; Laursen, 2012; Nooteboom et al., 2007). Radical innovations require breaking path-dependent learning (Hart & Christensen, 2002; Tushman & Rosenkopf, 1996). Bunduchi (2013) found that over-reliance on trust and geographic proximity in selecting NPD suppliers fosters incremental rather than radical innovation. Consequently, maintaining recurring ties with familiar partners may limit access to novel technological opportunities and ideas (Uzzi, 1996, 1997).

We believe that the relationship between Embraer, the regional jet manufacturer, and GE, its engine supplier, is a good illustration of the trade-offs involved when picking a familiar partner or a new one for NPD, their new E-jets. Embraer had a long-standing relationship with GE. However, in 2008, Pratt & Whitney (P&W) developed a new generation of engines based on the Geared Turbofan (GTF) technology, PW1000G. This engine was 10–15% more efficient than other engines used in regional jets. Despite this promising performance, Embraer was reluctant to adopt the new technology and form an alliance with P&W to collaborate to incorporate these engines to its new aircrafts because of its existing partnership with GE. In fact, in 2010, Embraer's CEO Frederico Curado acknowledged that while the GTF engine had shown promising results, the company preferred to continue working with GE. In his words: "Our level of comfort in the GTF is certainly higher today than it was two years ago because there are data from flights the engine has been running. On the other hand, GE is a strong partner of Embraer, and everything they tell us is absolutely convincing that they are also able to bring the same sort of value with a different architecture" (Anselmo & Velocci, 2010). It was not until three years later that Embraer finally decided to switch to P&W's engine to power the next generation of their E-jets, somewhat later than many of its competitors (Polek, 2013). This delay in adopting P&W's technology in their new aircraft placed Embraer at a competitive disadvantage, as other manufacturers were already benefiting from the enhanced fuel efficiency and performance gains of the GTF engine (Polek, 2013). We believe this case illustrates a biased approach to alliance partner selection. When deciding with whom to ally to develop their new aircraft, Embraer prioritized partner stability and predictability over potential performance gains, illustrating how firms with strong relational capital arising from their existing alliance network may delay strategic shifts even when new opportunities arise (Bureth et al., 1997). The hesitancy to transition to a new alliance partner for the development of its new aircraft, despite clear technological advantages, highlights the role of managerial biases in shaping firms' strategic decision-making. As Polek (2013) notes, Embraer eventually recognized the necessity of change but only after competitors had already made their moves, underscoring how overreliance on familiar partners can lead to inertia in strategic partnerships.

2.2 The information transparency decision: a matter of bandwidth

The choice of familiar versus stranger is tempered by the need to ensure enough information transparency to make the agreement successful in terms of learning out-

comes. In this sense, we define “alliance bandwidth” as the extent of information flow and transparency between partners, impacting coordination and joint performance. This definition captures the essence of information transparency, emphasizing how freely and accurately partners exchange critical insights to facilitate coordination and decision-making. As discussed, NPD projects require partners to exchange highly tacit and complex knowledge, which means that the alliance requires transparency and open communication channels to facilitate joint research (Heiman & Nickerson, 2004; Larsson et al., 1998). Therefore, investing in wide-bandwidth communication channels within the alliance can maximize the value derived from the relationship, as partners share extensive and detailed information, reducing uncertainty and fostering trust. Firms can also benefit from synergistic effects by developing relationship-specific assets. However, this approach comes with the downside of increasing the risk of unintended knowledge spillovers to the partner (Grimpe & Kaiser, 2010; Martínez-Noya et al., 2013; Mudambi & Tallman, 2010; Oxley & Sampson, 2004). Conversely, adopting a narrow bandwidth reduces the risk of unintended knowledge spillovers but paradoxically limits the potential value that can be derived from the alliance. Restricted, selective, or delayed information flows can lead to misalignment and inefficiencies. In other words, firms must navigate the tension between knowledge sharing and knowledge expropriation (Heiman & Nickerson, 2004).

Given the trade-offs associated with bandwidth, firms are more likely to establish wide-bandwidth relationships with existing partners rather than with new ones. Since alliance partner selection decisions are taken by managers, they show greater preference for ‘homophily’, that is, they tend to prefer partners who share important values or technological specialization rather than the alternative, which is ‘heterophily’ (Aral & Van Alstyne, 2011). Homophily does not encourage novelty because both partners tend to have similar technological profiles, lowering the probability of novelty (Narula, 2014). The learning potential remains greatest when partnering with relatively unknown actors, but firms tend to assign lower bandwidth in cooperating with new or unfamiliar partners. Homophily between establishments eases communications, but reduces novelty, while a small overlap of technological specialization increases the potential of novelty, but makes communications difficult (Nooteboom, 1999; Narula & Santangelo, 2009).

An illustrative example of this bandwidth dilemma (and how firms forming NPD alliances may choose to limit alliance bandwidth below the optimum to mitigate the risks of knowledge leakage) is Nokia’s 2007 joint R&D collaboration agreement with its Taiwanese supplier Foxconn to start developing mobile phones (Larsen & Pedersen, 2011). As explained by the authors of this case study, Foxconn was chosen by Nokia not only because cost savings resulting from relocating product development capacity to China, but mainly because Foxconn was one of the biggest companies in electronic component manufacturing and thus it had critical knowledge and expertise on optimizing product development processes that Nokia saw the potential of tapping into. Therefore, aligned with Tunisini and Zanfei (1998), this new joint R&D agreement between Nokia and Foxconn can be viewed as a source of technological innovation and a process of knowledge creation for NPD (Tunisini & Zanfei, 1998). Indeed, according to Larsen and Pedersen (2011), when the alliance for joint R&D collaboration started it became evident that frequent meetings and monitoring were

required for effective joint R&D collaboration. However, despite this requirement for increased alliance bandwidth, Nokia engineers displayed resistance towards sharing critical knowledge with the external partner. In this case, Nokia employees exhibited a heightened concern for avoiding the potential risks of knowledge leakage and the loss of core competencies. This mindset led them to be cautious about engaging fully with Foxconn who had demonstrated its expertise in product development but was also a supplier of Nokia's most important competitors such as Apple, Sony-Ericsson or Motorola. As one Nokia product development manager noted: "People in Nokia see it as if we are selling our core competences. On a design level, people have been very nervous and cautious towards the joint research development" (Larsen & Pedersen, 2011, p. 8). The company's internal resistance, driven by this focus on risk avoidance, made it a significant managerial challenge to shift employee perceptions and encourage a more open approach to collaboration. This focus on minimizing risk and avoiding negative outcomes overshadowed the potential benefits of the collaboration. Overall, the case illustrates how shifting to a mindset that emphasizes the potential rewards of collaboration require considerable managerial intervention. However, it should be acknowledged that when the risks of knowledge leakage are perceived to be high, limiting the scope of the alliance may not always be an effective governance mechanism. Li et al. (2008) highlighted a similar situation with Apple's decision to engage Microsoft in developing applications for the Mac. Despite attempts to control the flow of information, Microsoft was able to gain critical knowledge about Apple's graphical user interface (GUI), which contributed to the development of Microsoft's Windows operating system. This example further illustrates that even when firms limit their openness, the risk of unintended knowledge transfer remains significant.

In conclusion, while existing evidence shows that firms often deviate from profit-maximizing behavior in their alliance partner choices, current theoretical approaches fall short in fully explaining when and why these deviations occur. To address this gap, the following section introduces a conceptual framework that integrates insights from regulatory focus theory and managerial perspectives on risk-taking with the relational view of alliances, to better account for the influence of framing in shaping alliance decisions.

3 A regulatory focus perspective on partner selection

As previously mentioned, regulatory focus theory posits that individuals pursue goals via two distinct orientations: a promotion focus, centered on achieving positive outcomes, and a prevention focus, aimed at avoiding negative outcomes (Higgins, 1998). Promotion-focused individuals emphasize accomplishments, hopes, and aspirations, which fosters creativity, flexibility, and proactive risk-taking to achieve the best possible outcomes. In contrast, prevention-focused individuals prioritize safety, responsibilities, and obligations, leading to vigilant behavior oriented toward doing whatever it takes to avoid losses (Higgins, 1998: 16). Although rooted in individual psychology, regulatory focus has been shown to influence exchange relationships and firm-level decisions, since firms act through individuals (Das & Kumar, 2011; Weber & Mayer, 2010, 2011; Weber et al., 2011).

Based on this theoretical foundation, we expect that managers frame the NPD alliance partner decision through either a promotion or prevention lens. We anticipate that a promotion focus will encourage managers to be more open to sharing information and new ideas, to take greater risks, and to prioritize value creation over cost minimization (Madhok, 1996). Managers with this focus should be more inclined toward exploratory activities (Tuncdogan et al., 2017), new product development initiatives (Agnihotri & Bhattacharya, 2021), and expanding alliance bandwidth (Qiu & Haugland, 2019). Conversely, we expect that a prevention focus will lead managers to act more cautiously, particularly in sharing information that might be commercially exploited, with a strong emphasis on loss avoidance and safeguarding existing assets (Qiu & Haugland, 2019; Das & Kumar, 2011; Bryant & Dunford, 2008). Further, research on managerial risk-taking shows that risk tolerance varies with firm performance: firms tend to be risk-averse when performing well but more willing to take risks under adversity (March & Shapira, 1987; McCrimmon & Wehrung, 1986). Therefore, we expect that the framing of decisions will often relate to the status quo as a reference point (Barberis, 2013), with firms comparing the expected value of a new partner against continuing with a familiar one.

Extending these arguments and consistent with prior research showing that technological leaders and laggards pursue different innovation goals and competitive dynamics (Alcácer & Chung, 2007; Arora et al., 2016; Brancati et al., 2022; Cappelli et al., 2023; Giachetti & Li Pira, 2022; Giachetti & Torrisi, 2018; Lieberman & Asaba, 2006; Narula & Santangelo, 2009), we expect that the framing of alliance partner decisions will vary depending on the firm's competitive position. Specifically, we expect industry challengers aiming to unseat incumbents to adopt a promotion focus, seeking growth and breakthrough innovation through new alliances. In contrast, we expect industry leaders to adopt a prevention focus, emphasizing risk aversion and continuity. Accordingly, we propose two distinct logics for alliance partner selection based on firm position. These scenarios are illustrated in Fig. 1 and will be further developed in the following sections.

3.1 Applying regulatory focus to partner decisions of industry leaders vs. challengers

When assessing the replacement of a known partner for a stranger partner for NPD, the firm is expected to compare the potential gains and losses associated with allying with the new partner with those offered by the already known partner, which can be understood as the reference point (Kahneman & Tversky, 1979). The distinction between the different reference points of an industry leader and a challenger is significant. Potential losses may put in danger the preservation of the status quo for a leader. Likewise, significant potential gains can help the challenger to dethrone the leader. Based on this, we propose the following two scenarios.

Industry leaders. Regulatory perspectives on risk-taking suggest that market leaders tend to adopt more conservative alliance partnering strategies to preserve their status quo (Rusetski & Lim, 2011). Leaders typically enjoy higher profitability through market power, economies of scale, first-mover advantages, and reputational benefits (Ferrier et al., 1999). Although they may collaborate with both familiar and

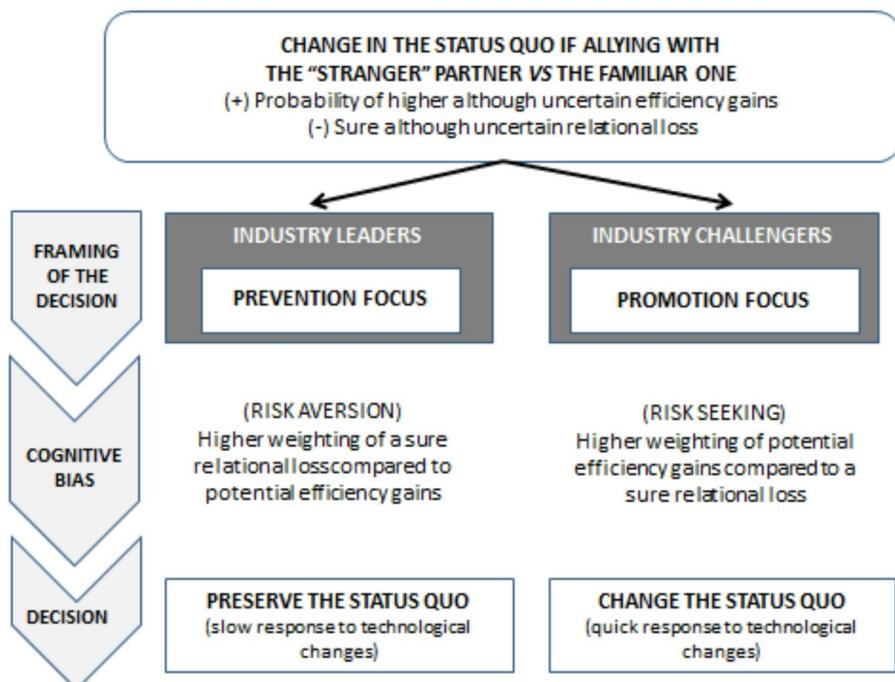


Fig. 1 A Regulatory focus theoretical framework to explain NPD alliance partner decisions of industry leaders vs. challengers

new partners for new technology development, when deciding whether to continue with a familiar partner or switch to a stranger, leaders are expected to prefer maintaining their established R&D networks and be more reluctant to embrace change. This reluctance stems from their greater potential losses in knowledge spillovers and relational capital compared to laggards. Indeed, stronger knowledge bases increase the propensity to use safeguards against knowledge expropriation (Heiman & Nickerson, 2004; Norman, 2002). Moreover, leaders face higher risks not only of knowledge spillovers (Arora et al., 2016) but also of damaging relational capital, as replacing a familiar partner may upset that partner and signal low commitment to the wider network (Dyer & Singh, 1998).

We therefore expect industry leaders to frame the NPD alliance partner decision with a prevention focus. In this context, this orientation entails a vigilant effort to avoid losses by minimizing the risks of opportunistic behavior and preserve the relational capital with the established partner (Ghoshal & Moran, 1996; Malhotra & Murnighan, 2002; Weber & Mayer, 2011). Such a cognitive bias favors stability over change and leads to negative expectations regarding the behavior of new partners due to heightened vigilance (Higgins, 2000). Consequently, firms may overestimate the risks of partnering with a stranger and underestimate the potential benefits. Thus, when deciding between maintaining the status quo (assigning the NPD project to a familiar partner) or choosing a new partner, the latter must offer clear net advantages

to offset the risks associated with abandoning the firm's comfort zone. This reasoning leads to our first proposition:

Proposition 1 *When selecting partners for NPD, an industry leader is more likely to adopt a prevention focus and prefer to keep on allying with a familiar partner rather than a stranger one.*

Under what circumstances will industry leaders be willing to forsake the status quo? We argue that the change will not occur until the size of the aforementioned relational loss is reduced, which from a dynamic perspective will happen when the uncertainty regarding the real technological competence of the familiar partner disappears. As uncertainty is the main source of deviations from rational behavior (Cyert & March, 1963), any reduction in uncertainty would reduce the previous cognitive biases. With the simple passage of time, firm managers collect more information on the real technological competencies of the familiar partner. This means that if the familiar partner fails to meet its performance standards, the value of the relationship will diminish, and the relational loss will be reduced. In addition, once it becomes clear that the established familiar partner is not capable of achieving the expected objectives, the rest of the firm's network members will understand the firm's decision to change alliance partner, thus not reducing the reputation of the firm as a committed network partner. This is why Embraer took three years to decide to switch engine suppliers, despite the higher efficiency gains that the new partner (P&W) offered compared to GE's technology. Furthermore, when the competence uncertainty disappears, the expected relative efficiency gains from switching to the new partner will increase because the firm will be more certain about the lower efficiency of the familiar partner. In line with this argument, Tyler and Caner (2016) have demonstrated that firms are more motivated to form R&D alliances when their new product introductions perform below their aspiration levels. Thus, we argue that as competence uncertainty is reduced cognitive biases will diminish and the firm is expected to follow a less-biased partner selection strategy and choose the new best suited partner outside the network. This leads us to:

Proposition 2 *As competence uncertainty is reduced, the likelihood of industry leaders embracing a change of partner increases.*

A prevention focus among industry leaders may explain not only their slow response to change but also their cautious behavior toward new alliance partners. Although competence uncertainty may be reduced, behavioral uncertainty (arising from partnering with a stranger) remains. This is especially relevant for industry leaders, who are more vulnerable than challengers to unintended knowledge spillovers (Arora et al., 2016). Such fears intensify when the partner could commercially exploit acquired knowledge beyond the agreement, particularly if the partner is a competitor (Martínez-Noya & García-Canal, 2016; Martínez-Noya et al., 2013; Un et al., 2010). From a regulatory focus perspective, industry leaders' larger knowledge base increases their risk of loss (Arora et al., 2016; Weber & Mayer, 2011), leading them to adopt a prevention-framed contract. This contract design entails vigilant monitoring within

the alliance to minimize potential knowledge losses, though it may also hinder technological learning.

Cognitive biases linked to the prevention focus cause leaders to overemphasize potential losses, prompting them to select a narrower alliance bandwidth than what would be theoretically optimal. A prevention-framed contract fosters negative expectations regarding the new partner's cooperative behavior, leading firms to minimize knowledge leakage through detailed contract specifications. This cautious approach can prevent the focal firm from fully benefiting from the partner's superior technological capabilities (Weigelt, 2012). Supporting this, Monteiro, Mol, and Birkinshaw (2015) found that secrecy by focal firms in innovation alliances acts as a barrier to leveraging external knowledge, damaging innovation performance. Thus, a prevention-framed contract leads firms to adopt a non-profit-maximizing alliance strategy, aiming for satisficing rather than maximizing outcomes, which can be considered a suboptimal choice driven by their framing of the situation. This leads us to:

Proposition 3 *When a stranger is chosen over a familiar partner by industry leaders, the likelihood of firms defining a low and suboptimal alliance bandwidth increases.*

We propose that it is not until both the competence and the behavior uncertainty are reduced that industry leaders are expected to follow a profit maximizing alliance strategy, by adopting a promotion focus. As partners get to know each other better and trust is developed, the situation may lead firms to turn their prevention focus to a promotion one in which the contract is more likely to focus on general milestones instead of detailed specifications on how to complete the project (Weber & Mayer, 2011). Indeed, over time, firms are expected to learn how to work with each other and how to contract (Mayer & Argyres, 2008). It is for this reason that as behavioral uncertainty is reduced, we expect the focal firm to adopt a promotion-framed contract and increase its alliance bandwidth to its optimal level to maximize the potential value that can stem from the alliance. Therefore, we propose:

Proposition 4 *As the behavioral uncertainty regarding the stranger partner is reduced, industry leaders will increase the likelihood of defining a high and optimal degree of alliance bandwidth.*

Industry challengers. A different scenario emerges when the firm is a challenger in the industry, and it is interested in altering the existing hierarchy of competitors within the industry. As a challenger, it will more likely frame the partner decision with a promotion focus (March & Shapira, 1987; McCrimmon & Wehrung, 1986). This means that challengers may be willing to assume greater risks and assign a higher value to the potential gains that can be obtained through a partnership with an unknown firm. However, they are also likely to underestimate the costs of knowledge loss to the new partner. Indeed, previous research has shown that the weaker a firm's knowledge base, the lower the propensity to use safeguards against knowledge expropriation (Heiman & Nickerson, 2004; Norman, 2002), as they are expected to have less to lose in terms of knowledge spillovers (Arora et al., 2016) and more to win in terms of improving their market position, given their current situation. In other words, the

promotion focus leads these firms to maximize their learning opportunities, and thus the likelihood of selecting a new partner instead of the familiar one increases. Indeed, these firms are expected to perform below social aspiration levels both in financial terms as well as in new product introductions, which it has been shown that this drive firms to increase their R&D search intensity (Chen, 2008) and number of R&D alliances (Martínez-Noya & García-Canal, 2021; Tyler & Caner, 2016). It may also lead to a strong propensity to replace current exchange partners due to perceptions of underperformance (Azoulay et al., 2010; Klueter et al., 2025). This is so because when assessing the value offered by the alternative partner, the value of maintaining the status quo (its reference point) is lower for challengers than for leaders, and thus they have less to lose in terms of knowledge spillovers and relational capital than leaders in departing from the status quo. Therefore, we propose:

Proposition 5 *When selecting partners for NPD, an industry challenger is more likely to adopt a promotion focus and ally with a stranger partner than a familiar one.*

In addition, we expect that the competitive disadvantage faced by challengers within an industry will lead them to also adopt a promotion-framed contract with the new partner to define the optimal level of bandwidth within the alliance to maximize learning opportunities. As these firms have less to lose from knowledge spillovers (Arora et al., 2016; Heiman & Nickerson, 2004; Norman, 2002), we expect them to design a contract to try to maximize the value that can be obtained from the new alliance partner in terms of learning and benefits from coordination and communication and thus would be willing to adopt a configuration of the alliance bandwidth oriented to maximize its innovation goals. Indeed, promotion contracts may set expectations of positive behavior in the relationship that may even go beyond the letter of the contract (Weber & Mayer, 2011). This means that framing will induce partners to develop closer ongoing relationships and thus achieve the maximal goals. This leads to our final proposition:

Proposition 6 *When a stranger is chosen over the familiar partner by industry challengers, the likelihood of firms defining a high and optimal degree of alliance bandwidth increases.*

Figure 2 summarizes the different propositions discussed in the paper. Thereby, providing an explanation of why leaders may react more slowly than challengers when facing technological disruptions.

4 Discussion and conclusion

When forming NPD alliances under high levels of competence uncertainty, firms must often decide: (1) whether to ally with a familiar partner within their network or a new partner that may offer more suitable competencies for the project, and (2) whether or not to maintain a high degree of bandwidth within the alliance. In this paper we have explained that the outcome of these two decisions can shape the NPD innovation and

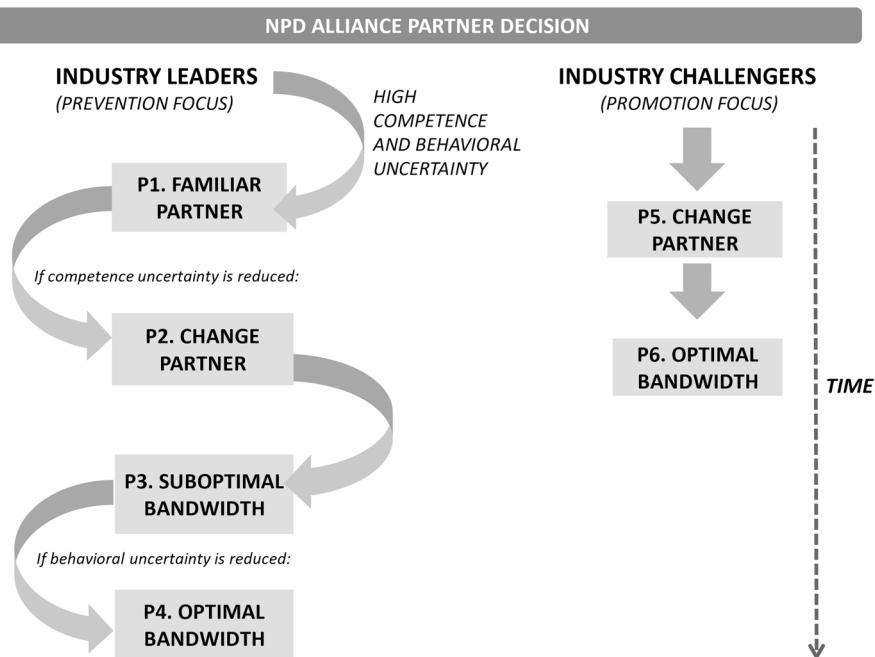


Fig. 2 Propositions about NPD alliance partner decisions of industry leaders vs. challengers

learning outcomes. As graphically illustrated in Fig. 3, firms are expected to have the greatest potential innovation outcome by engaging in a high bandwidth alliance with the stranger partner with fresher ideas. However, in practice we observe that many of them do not directly choose this option. We have argued that this is because firms differ in the way they frame their alliance partner decisions.

By integrating insights from regulatory focus theory with more traditional approaches to alliance formation, we have offered a comprehensive explanation of why firms appear to make inconsistent partner selection decisions and sometimes make what may seem suboptimal choices. On the one hand, we argue that it is precisely the firms that lag within the industry the ones that more rapidly adopt a value maximizing alliance strategy (quadrant 'A' in Fig. 3). We argue that the promotion focus adopted by these firms when managing their alliance portfolio allows them to behave with higher levels of flexibility and lower risk aversion, making them more eager to change the status quo. On the other hand, we argued that the prevention focus adopted by industry leaders can indeed explain why many of these firms take so much time to end up in that maximizing alliance strategy as they focus on risk minimization. Often, they first select a suboptimal outcome by going to 'C' (selecting a less capable but familiar partner within its existing R&D network); and once they decide to change partner and depart from its status quo, they may end up in 'B' (not defining an optimal degree of bandwidth within the alliance). In the theoretical framework presented we propose that it is not until the uncertainty regarding the new

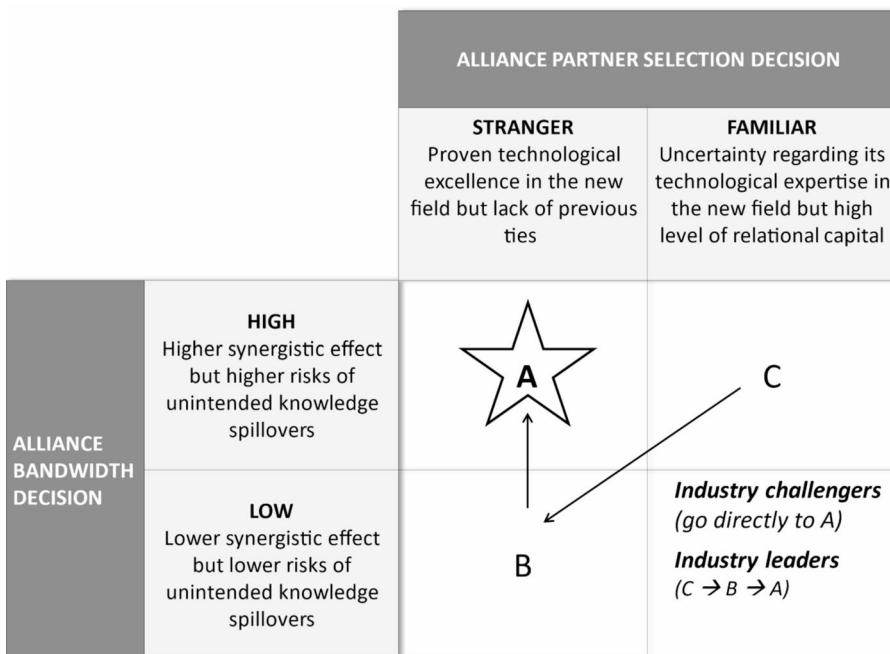


Fig. 3 Solutions to partner selection dilemmas in NPD alliances for industry leaders vs. challengers

partner's behavior is reduced that they may finally decide to adopt a promotion focus with the stranger partner and thus end up in quadrant 'A'.

We argue that these behavior patterns may explain why many alliances fail to achieve their expected outcomes (Das & Teng, 2000; Ireland et al., 2002; Reuer, 2000), and that they can be better understood if behavioral insights and managerial perspectives on risk taking are included in our theoretical frameworks. This is so because although it is known that firms may decide to alter their networks to manage or cope with different types of uncertainty, it has been shown that this does not necessarily mean that the attempt will be successful (Beckman et al., 2004). We believe that the inclusion of these cognitive biases in the equation helps to raise the accuracy when predicting alliance partner decisions under high levels of both competence and behavioral uncertainty. Therefore, our paper contributes to previous studies on alliance formation that also consider behavioral insights when explaining alliance decisions (Beckman et al., 2004; Chen, 2008; Reuer et al., 2013; Tallman & Shenkar, 1994; Tyler & Caner, 2016; Martínez-Noya & García-Canal, 2021). Overall, the framework proposed here contributes to literature that calls for new areas of research in strategy, such as behavioral strategy or microfoundations (Barney & Felin, 2013; Contractor et al., 2019; Elia et al., 2021; Foss & Pedersen, 2014; Johnson et al., 2015). Specifically, it is increasingly acknowledged that strategy literature can benefit from a higher integration of psychological insights and micro-level concepts—such as managerial perceptions and other social factors of a noneconomic nature— influencing firm decisions (Kaplan, 2008a, b; Su et al., 2023; Surdu et al.,

2021). When explaining strategic decisions, it is important to remember that both economic and noneconomic factors are assessed not by firms, but by human actors. Human actors not only have limited information-processing capabilities and a propensity toward satisficing decisions (Cyert & March, 1963; Simon, 1945) but also hold differing perceptions of the associated costs and benefits—both for the firm as a whole and for themselves personally (Tallman & Shenkar, 1994; Tuncdogan et al., 2017). Therefore, firms do not behave like rational economic actors and often follow strategies that may appear to be suboptimal ones from a rational choice perspective (Elia et al., 2019). Indeed, as shown by the literature on escalating commitments, when people must decide which of two similar resources to use, they choose the resource for which they paid the most. This implies that any demonstration that sunk costs influence subsequent investment decisions calls into question the description of individuals as economically rational decision makers (Staw & Hoang, 1995). It is for this reason that we believe that the analysis of how individuals (managers) frame decisions and what drive them to adopt a prevention or a promotion focus becomes critical to better understand firm's behavior.

Given the potential negative consequences of poor partner selection on a firm's competitive advantage, our analysis shows that a deeper understanding of the cognitive biases driving these decisions is essential; in particular, the propensity to weigh losses more heavily than gains under uncertainty. Specifically, we argue that the adoption of a prevention focus by industry leaders leads them to prioritize minimizing appropriability hazards over maximizing value creation, as a means of protecting the status quo. For this reason, in addition to offering empirically testable propositions that can be tested empirically in further studies, this paper calls for further research into how firms can organize themselves to reduce or avoid biases stemming from how strategic decisions are framed. Since strategic decisions often need to be made under conditions of incomplete information, enhancing organizational flexibility requires mechanisms that mitigate cognitive biases triggered by uncertainty. One such measure is to reduce behavioral uncertainty surrounding potential partners. Rather than relying on a prevention-oriented contract frame, firms can transfer critical technological knowledge in a relation-specific way, making it difficult for partners to exploit outside the scope of the alliance (Buss & Peukert, 2014). This approach is exemplified by Toyota's interactions with its suppliers (Dyer & Hatch, 2006).

Another important challenge is that relationship-specific investments and relational capital often reside at the individual manager level, rather than at the organizational level (Inkpen & Currall, 1998). In such cases, managers may resist partner changes due to concerns over losing the value of their personal networks. To mitigate this bias, it is advisable for firms to involve multiple managers in key alliance decisions. Prior research has shown that information asymmetries and adverse selection risks faced by executives not only affect governance choices but also shape partner preferences (Reuer et al., 2013). In fact, Chen et al. (2014) provide evidence that managerial social ties can negatively impact supplier selection and future firm performance, despite the direct costs these choices may impose on the managers themselves. Thus, social networks may exert a detrimental influence on the quality of alliance decisions. To counteract this, team-based decision-making and leadership rotation inside the team can help reduce bias and promote more optimal partner

selection. Indeed, it is common to observe changes in trading partners following the departure of managers and executives (Broschak & Block, 2014).

In this sense, it is worth debating whether firms do indeed tend to overestimate the risks of embracing new ventures, rather than underestimate the risks of maintaining the status quo (Martin, 2007). As argued by Martin (2007), executive teams tend to carefully assess the risk of different new ventures, but neglect to make a similar assessment of the risk of retaining the status quo. We believe that the concepts developed here and applied to the partner selection decision in NPD alliances allow managers to more accurately assess both the positive and negative possible outcomes of each alternative and thereby demonstrate the high risks of inaction. All in all, it is important to note that both competence and partner behavior uncertainty decrease with experience and the passage of time. This means that over time, with more complete information, the focal firm should be able to accurately assess if it made a wrong decision, as well as it is expected to learn how to design better contracts to achieve the desired outcomes (Mayer & Argyres, 2008). However, given the current technological dynamism, by the time the firm recognizes its mistake, it may be too late, and it may lose its technological edge (Li et al., 2025). We expect that a firm with a prevention focus is more likely to be focused on continued incremental innovation which can make it vulnerable to competitors with a promotion focus who are actively trying to change the nature of the battle. It is therefore for this reason that we call for further studies on what drive firms to adopt different contract framings and their implication on firms' behavior and strategic decisions. Although our model aims to describe what firms actually do, we believe it also serves as a call for firms to avoid falling into framing traps.

4.1 Limitations and suggestions for further research

While our study provides a novel theoretical perspective on partner selection in NPD alliances based on regulatory focus and managerial perspectives on risk-taking, it is not without limitations. Addressing these limitations will offer fruitful avenues for future research. First, the propositions we develop offer a theoretical lens but require empirical validation to assess their practical relevance. Future studies can employ quantitative methodologies, such as panel data analysis or experiments, to examine the causal relationships proposed. Second, our framework predominantly focuses on firm-level strategic responses to regulatory focus in partner selection. However, individual-level managerial cognition and decision-making processes could play a crucial role in shaping firm actions. Exploring the interplay between organizational and individual-level factors could yield deeper insights. Third, our study assumes that regulatory focus influences industry leaders and challengers in a relatively uniform manner. However, heterogeneity among organizations, arising from factors such as ownership structure, industry dynamics, and cultural differences, may moderate these effects. Similarly, given that different types of partners may have different strategic orientations and thus generate different levels of misappropriation risks (Cappelli et al., 2023) it would be interesting to analyze whether the dynamics of NPD alliance partner selection vary by partner type. In conclusion, future studies could investigate how such contextual factors shape the influence of regulatory focus on partner selec-

tion decisions, and ultimately identify how firms can organize their alliance portfolio to better create and appropriate knowledge in an open innovation context (Colombo et al., 2023).

In this regard, we identify as a particularly pressing avenue for future research the study of the impact of artificial intelligence (AI) on NPD partner selection and alliance portfolio reconfiguration. We believe that the study of the NPD alliance partner paradoxes presented in our study take on critical relevance in this new era of AI-driven competition, in which firms must manage innovation under disruption and uncertainty (Li et al., 2025). The emergence of AI has fundamentally altered the sources of competitive advantage, shifting from traditional resource-based advantages to dynamic capabilities in data analytics, automation, and algorithmic decision-making (Krakowski et al., 2023). On the one hand, this transformation forces firms to tap into new technological competencies, often requiring them to reconsider their existing alliances and forge new partnerships with unfamiliar AI-driven firms and tech-based collaborators (Ameye et al., 2023). As AI reshapes the business landscape, firms must navigate greater competence uncertainty, making regulatory focus in partner selection more crucial than ever. On the other hand, at the formal level, AI language models are expected to assist in crafting contracts that mitigate opportunism risks, as well as enhance the efficiency of partner identification and selection by streamlining the screening and evaluation process, ensuring better strategic fit and collaboration (Shah & Swaminathan, 2008). By leveraging AI, firms can assess a larger pool of potential partners while conducting deeper, more dynamic analyses, effectively overcoming the typical trade-off between information breadth and depth that constrains human decision-making, and thus the alliance bandwidth decision. Consequently, AI-driven disruptions have shifted the foundations of competitive advantage, forcing firms to rethink how they organize their technological portfolios and select strategic partners (Haefner et al., 2021). The emergence of AI-based technologies has driven the need to access often new technological competencies, leading firms to reevaluate existing partnerships and form new alliances to maintain strategic flexibility (Hanelt et al., 2021). As firms navigate these transformations, regulatory focus may also shift, altering how firms interpret risk and opportunity in partner selection. For example, AI-driven partner selection mechanisms may reinforce existing biases in managerial decision-making, influencing alliance choices in ways that differ from traditional human cognition models. Future research could explore how AI-induced biases alter managers' regulatory focus and the extent to which adaptive learning mechanisms mitigate or exacerbate these effects. By addressing these avenues, future studies can enhance our understanding of the relationship between regulatory focus and partner selection, reinforcing the conceptual contributions of this work and expanding its practical implications.

Acknowledgements This work was supported by the Spanish Ministry of Science, Innovation and Universities under Grant PID2024-160438NB-I00. We also thank professors Álvaro Cuervo-Cazurra, Gabriel Benito, Stephen Tallman, Kyle Mayer, Libby Weber and Geert Duysters for their useful comments and suggestions that helped to improve this paper.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long

as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

References

Agnihotri, A., & Bhattacharya, S. (2021). Chief executive officer regulatory focus and competitive action frequency. *Group & Organization Management*, 46(5), 931–962.

Alcácer, J., & Chung, W. (2007). Location strategies and knowledge spillovers. *Management Science*, 53(5), 760–776.

Ameye, N., Bughin, J., & van Zeebroeck, N. (2023). How uncertainty shapes herding in the corporate use of artificial intelligence technology. *Technovation*, 127, 102846.

Anand, B., & Khanna, T. (2000). Do firms learn to create value? The case of alliances. *Strategic Management Journal*, 21(3), 295–315.

and Expectations. *Academy of Management Review*, 36, 1, 53–75.

and Maximize Transaction Value. *Strategic Management Journal*, 18:7, 535–556.

Anselmo, J. C., & Velocci, J. A. (2010). Decision time. *Aviation Week & Space Technology*, May 10, 52–57.

Aral, S., & Van Alstyne, M. (2011). The diversity-bandwidth trade-off reviewed. *American Journal of Sociology*, 117(1), 90–171.

Ariño, A., de la Torre, J., & Ring, P. S. (2001). Relational quality: Managing trust in corporate alliances. *California Management Review*, 44(1), 109–131.

Arora, A., Athreye, S., & Huang, C. (2016). The paradox of openness revisited: collaborative innovation and Patenting by UK innovators. *Research Policy*, 45(7), 1352–1361.

Azoulay, P., Repenning, N. P., & Zuckerman, E. W. (2010). Nasty, brutish, and short: Embeddedness failure in the pharmaceutical industry. *Administrative Science Quarterly*, 55, 472–507.

Barberis, N. C. (2013). Thirty years of prospect theory in economics: a review and assessment. *Journal of Economic Perspectives*, 27 No(1), 173–196.

Barney, J., & Felin, T. (2013). What are microfoundations?? *Academy of Management Perspectives*, 27(2), 138–155.

Beckman, C., Haunschild, P., & Phillips, D. (2004). Friends or strangers? Firm-Specific uncertainty, market uncertainty, and network partner selection. *Organization Science*, 15, 259–275.

Brancati, E., Brancati, R., & Guarascio, D. (2022). Innovation drivers of external competitiveness in the great recession. *Small Business Economics*, 58, 1497–1516.

Broschak, J. P., & Block, E. S. (2014). With or without you: When does managerial exit matter for the dissolution of dyadic market ties? *Academy of Management Journal*, 57(3), 743–765.

Bryant, P., & Dunford, R. (2008). The influence of regulatory focus on risky decision-making. *Applied Psychology: an International Review*, 57, 335–359.

Bunduchi, R. (2013). Trust, partner selection and innovation outcome in collaborative new product development. *Production Planning & Control: the Management of Operations*, 24(2–3), 145–157.

Bureth, A., Wolff, S., & Zanfei, A. (1997). The two faces of learning by cooperating: The evolution and stability of inter-firm agreements in the European electronics industry. *Journal of Economic Behavior & Organization*, 32(4), 519–537.

Buss, P., & Peukert, C. (2014). R&D outsourcing and intellectual property infringement. *Research Policy*, 44(4), 977–989.

Cappelli, R., Corsino, M., Laursen, K., & Torrisi, S. (2023). Technological competition and patent strategy: protecting innovation, preempting rivals and defending the freedom to operate. *Research Policy*, 52(6), 104785.

Carson, S., Madhok, A., & Wu, T. (2006). Uncertainty, opportunism, and governance: the effects of volatility and ambiguity on formal and relational contracting. *Academy of Management Journal*, 49(5), 1058–1077.

Chen, W. R. (2008). Determinants of firms' Backward- and Forward-Looking R&D search behavior. *Organization Science, 19*(4), 609–622.

Chen, T., Levy, H., Martin, X., & Shalev, R. (2014). Buying Products and Services from Whom You Know (March 14, 2014). Available at SSRN: <http://ssrn.com/abstract=2409330>

Cohen, W. M., & Levinthal, D. A. (1990). Absorptive Capacity: A new perspective on learning and innovation. *Administrative Science Quarterly, 35*, 128–152.

Colombo, M. G., Hoisl, K., Reichstein, T., et al. (2023). Open innovation, value creation and value capture: An introduction. *J Ind Bus Econ, 50*, 731–742.

Contractor, F., Foss, N., Kundu, S., & Lahiri, S. (2019). Viewing global strategy through a microfoundations lens. *Global Strategy Journal, 9*(1), 3–18.

Cyert, R. M., & March, J. (1963). *A behavioral theory of the firm*. Prentice Hall.

Das, T. K., & Kumar, R. (2011). Regulatory focus and opportunism in the alliance development process. *Journal of Management, 37*(3), 682–708.

Das, T., & Teng, B. (2000). Instabilities of strategic alliances: An internal tensions perspective. *Organization Science, 11*, 77–101.

Dyer, J. H. (1997). Effective Interfirm Collaboration: How Firms Minimize Transaction Costs.

Dyer, J. H., & Hatch, N. W. (2006). Relation-specific capabilities and barriers to knowledge transfers: Creating advantage through network relationships. *Strategic Management Journal, 27*(8), 701–720.

Dyer, J. H., & Singh, H. (1998). The relational view: Cooperative strategy and sources of interorganizational competitive advantage. *Academy of Management Review, 23*, 660–679.

Elia, S., Larsen, M. M., & Piscitello, L. (2019). Entry mode deviation: A behavioral approach to internalization theory. *Journal of International Business Studies, 50*(8), 1359–1371.

Elia, S., Greve, P., Vallone, T., & Castellani, D. (2021). The micro-foundations of industrial diversification through foreign acquisitions: The multifaceted role of CEO experience. *Long Range Planning, 54*(6), 102104.

Ferrier, W. J., Smith, K. G., & Grimm, C. M. (1999). The role of competitive action in market share erosion and industry dethronement: A study of industry leaders and challengers. *Academy of Management Journal, 42*(4), 372–388.

Förster, J., Grant, H., Idson, L. C., & Higgins, E. T. (2001). Success/failure feedback, expectancies, and approach/avoidance motivation: How regulatory focus moderates classic relations. *Journal of Experimental Social Psychology, 37*(3), 253–260.

Foss, J. N., & Pedersen, T. (2014). Microfoundations in strategy research. *Strategic Management Journal, Special Issue published online*. <https://doi.org/10.1002/smj.2362>

Gamache, D. L., McNamara, G., Mannor, M. J., & Johnson, R. (2015). Motivated to acquire? The impact of CEO regulatory focus on firm acquisitions. *Academy of Management Journal, 58*, 1261–1282.

Gamache, D. L., Neville, F., Bundy, J., & Short, C. E. (2020). Serving differently: CEO regulatory focus and firm stakeholder strategy. *Strategic Management Journal, 41*, 1305–1335.

Ghoshal, S., & Moran, P. (1996). Bad for practice: A critique of transaction cost theory. *Academy of Management Review, 21*, 13–47.

Giachetti, C., & Li Pira, S. (2022). Catching up with the market leader: Does it pay to rapidly imitate its innovations? *Research Policy, 51*(5), 10450.

Giachetti, C., & Torrisi, S. (2018). Following or running away from the market leader? The influences of environmental uncertainty and market leadership. *European Management Review, 15*(3), 445–446.

Grimpe, C., & Kaiser, U. (2010). Balancing internal and external knowledge acquisition: The gains and pains from R&D outsourcing. *Journal of Management Studies, 47*, 1483–1509.

Gulati, R. (1995). Does familiarity breed trust? The implications of repeated ties for contractual choice in alliances. *Academy of Management Journal, 38*, 85–112.

Haefner, N., Wincent, J., Parida, V., & Gassmann, O. (2021). Artificial intelligence and innovation management: A review, framework, and research agenda. *Technological Forecasting and Social Change, 162*, 120392.

Hanelt, A., Bohnsack, R., Marz, D., & Antunes Marante, C. (2021). A systematic review of the literature on digital transformation: Insights and implications for strategy and organizational change. *Journal of Management Studies, 58*(5), 1159–1197.

Hart, S., & Christensen, C. M. (2002). Driving innovation from the base of the global pyramid. *MIT Sloan Management Review, 44*(1), 51–56.

Heiman, B. A., & Nickerson, J. A. (2004). Empirical evidence regarding the tension between knowledge sharing and knowledge expropriation in collaborations. *Managerial and Decision Economics, 25*, 401–420.

Higgins, E. T. (1998). Promotion and prevention: Regulatory focus as a motivational principle. *Advances in Experimental Social Psychology*, 30, 1–46.

Higgins, E. T. (2000). Making a good decision: Value from fit. *American Psychologist*, 55(11), 1217.

Hoetker, G. (2005). How much you know versus how well I know you: Selecting a supplier for a technically innovative component. *Strategic Management Journal*, 26, 75–96.

Inkpen, A. C., & Currall, S. C. (1998). The nature, antecedents, and consequences of joint venture trust. *Journal of International Management*, 4(1), 1–20.

Ireland, R. D., Hitt, M. A., & Vaidyanath, D. (2002). Alliance management as a source of competitive advantage. *Journal of Management*, 28, 413–446.

Johnson, P. D., Smith, M. B., Wallace, J. C., Hill, A. D., & Baron, R. A. (2015). A review of multilevel regulatory focus in organizations. *Journal of Management*, 41, 1501–1529.

Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica*, 47, 263–291.

Kahneman, D., & Tversky, A. (1984). Choices, values, and frames. *American Psychologist*, 39(4), 341–350.

Kale, P., Singh, H., & Perlmutter, H. (2000). Learning and protection of proprietary assets in strategic alliances: Building relational capital. *Strategic Management Journal*, 21(3), 217–238.

Kaplan, S. (2008a). Framing contests: Strategy making under uncertainty. *Organization Science*, 19(5), 729–752.

Kaplan, S. (2008b). Cognition, capabilities, and incentives: Assessing firm response to the Fiber-Optic revolution. *Academy of Management Journal*, 51 (4).

Kavusan, K., & Frankort, H. T. W. (2019). A behavioral theory of alliance portfolio reconfiguration: Evidence from pharmaceutical biotechnology. *Strategic Management Journal*, 40(10), 1668–1702.

Klueter, T., & Monteiro, F. (2017). How does performance feedback affect boundary spanning in multinational corporations? Insights from technology scouts. *Journal of Management Studies*, 54(4), 483–510.

Klueter, T., Gosh, A., & Rosenkopf, L. (2025). Not in-sourced here! When does external technology sourcing yield familiar versus novel solutions? *Strategic Management Journal*, 46(2), 275–308.

Kogut, B., & Zander, U. (1992). Knowledge of the firm, combinative capabilities, and the replication of technology. *Organization Science*, 3, 383–397.

Kotabe, M., & Swan, K. S. (1995). The role of strategic alliances in high-technology new product development. *Strategic Management Journal*, 16, 621–636.

Krakowski, S., Luger, J., & Raisch, S. (2023). Artificial intelligence and the changing sources of competitive advantage. *Strategic Management Journal*, 44(6), 1425–1452.

Larsen, M. M., & Pedersen, T. (2011). *From in-house to joint R&D: The way forward for Nokia Denmark*. Richard Ivey School of Business Foundation.

Larsson, R., Bengtsson, L., Henriksson, K., & Sparks, J. (1998). The interorganizational learning dilemma: Collective knowledge development in strategic alliances. *Organization Science*, Special Issue: Managing Partnerships and Strategic Alliances, 9 (3): 285–305.

Laursen, K. (2012). Keep searching and you'll find: What do we know about variety creation through firms' search activities for innovation? *Industrial and Corporate Change*, 21(5), 1181–1220.

Laursen, K., & Salter, A. (2014). The paradox of openness: Appropriability, external search and collaboration. *Research Policy*, 43(5), 867–878.

Laursen, K., & Salter, A. (2023). What we know about open innovation, unresolved issues, and a checklist for future research. *Journal of Industrial and Business Economics*, 50, 743–764.

Li, D., Eden, L., Hitt, M., & Ireland, R. D. (2008). Friends, acquaintances, or strangers?? Partner selection in R&D alliances. *Academy of Management*, 51(2), 315–334.

Li, D., Fu, X., Narula, R., von Zedtwitz, M., & Wagner, B. (2025). R&D management under disruption and uncertainty. *R&D Management*. <https://doi.org/10.1111/radm.12747>

Lieberman, M. B., & Asaba, S. (2006). Why do firms imitate each other?? *Academy of Management Review*, 31(2), 366–385.

Madhok, A. (1996). The organization of economic activity: Transaction costs, firm capabilities and the nature of governance. *Organization Science*, 7(5), 577–590.

Madhok, A., & Tallman, S. B. (1998). Resources, transactions and rents: Managing value in interfirm collaborative relationships. *Organization Science*, 9, 326–339.

Malhotra, D., & Murnighan, J. (2002). The effects of contracts on interpersonal trust. *Administrative Science Quarterly*, 47, 534–560.

March, J. G., & Shapira, Z. (1987). Managerial perspectives on risk and risk taking. *Management Science*, 33(11), 1404–1418.

Martin, R. (2007). Underestimating the Risk of the Status Quo. *Rotman Magazine*. Spring: 4–8.

Martínez Noya, A., & García-Canal, E. (2016). The framing of knowledge transfers to shared R&D suppliers and its impact on innovation performance: A regulatory focus perspective. *R&D Management*, 46(2), 354–368.

Martínez-Noya, A., & García-Canal, E. (2021). Innovation performance feedback and technological alliance portfolio diversity: The moderating role of firms' R&D intensity. *Research Policy*, 50, 9.

Martínez-Noya, A., & Narula, R. (2018). What more can we learn from R&D alliances? A review and research agenda. *Business Research Quarterly*, 21(3), 195–212.

Martínez-Noya, A., García-Canal, E., & Guillén, M. F. (2013). R&D outsourcing and the effectiveness of intangible investments: Is proprietary core knowledge walking out of the door?? *Journal of Management Studies*, 50(1), 67–69.

Mayer, K., & Argyres, N. (2008). Learning to contract: Evidence from the personal computer industry. *Organization Science*, 15(4), 394–410.

McCrimmon, K. R., & Wehrung, D. A. (1986). *Taking risks*. Free.

Mesquita, L., & Brush, T. H. (2008). Untangling safeguard and production coordination effects in long-term buyer-supplier relationships. *Academy of Management Journal*, 51(4), 785–807.

Monteiro, F., Mol, M. & Birkinshaw, J. (2015). Ready to Be Open? Explaining the Firm-Level Barriers to Benefiting from Openness to External Knowledge. *Long Range Planning* (forthcoming).

Mowery, D., Oxley, J., & Silverman, B. (1996). Strategic alliances and interfirm knowledge transfer. *Strategic Management Journal*, 17, 77–91. Winter Special Issue.

Mudambi, S., & Tallman, S. (2010). Make, buy or ally? Theoretical perspectives on knowledge process outsourcing through alliances. *Journal of Management Studies*, 47, 1434–1456.

Narula, R. (2014). Exploring the paradox of Competence-creating subsidiaries: Balancing bandwidth and dispersion in MNEs. *Long Range Planning*, 47(1–2), 4–15.

Narula, R., & Santangelo, G. D. (2009). Location, collocation and R&D alliances in the European ICT industry. *Research Policy*, 38, 393–403.

Nooteboom, B. (1999). *Interfirm alliances: Analysis and design*. Routledge.

Nooteboom, B., Haverbeke, W. V., Duysters, G., Gilsing, V., & Oord, A. V. (2007). Optimal cognitive distance and absorptive capacity. *Research Policy*, 36(7), 1016–1034.

Norman, P. M. (2002). Protecting knowledge in strategic alliances: Resource ad relational characteristics. *Journal of High Technology Management Research*, 13, 177–202.

Oxley, J., & Sampson, R. (2004). The scope and governance of international R&D alliances. *Strategic Management Journal*, 25, 723–749.

Polek, G. (2013). Embraer Turns True Believer in Pratt's GTF. *Ain Air transportation Perspective*. January 14. <https://www.ainonline.com/aviation-news/air-transport/2013-01-14/embraer-turns-true-believer-pratts-gtf>

Prange, C., Eng, T. Y., & Li, J. (2015). Collaborative new product alliances: A review of the literature and research perspectives. *Strategic Change*, 24(4), 351–371.

Qian, C., Balaji, P., Crilly, D., & Liu, Y. (2023). Better safe than sorry: CEO regulatory focus and workplace safety. *Journal of Management*, 50, 1453–1487.

Qiu, X., & Haugland, S. A. (2019). The role of regulatory focus and trustworthiness in knowledge transfer and leakage in alliances. *Industrial Marketing Management*, 83, 162–173.

Reuer, J. J. (2000). Collaborative strategy: The logic of alliances. In T. Dickenson, & K. Pottinger (Eds.), *Mastering strategy* (pp. 345–350). FT Prentice Hall.

Reuer, J. J., Tong, T. W., Tyler, B. B., & Ariño, A. (2013). Executive preferences for governance modes and exchange partners: An information economics perspective. *Strategic Management Journal*, 34, 1104–1122.

Ritala, P., Olander, H., Michailova, S., & Husted, K. (2015). Knowledge sharing, knowledge leaking and relative innovation performance: An empirical study. *Technovation*, 35, 22–31.

Rusetski, A., & Lim, L. K. S. (2011). Not complacent but scared: Another look at the causes of strategic inertia among successful firms from a regulatory focus perspective. *Journal of Strategic Marketing*, 19(6), 501–516.

Scoresby, R. B., Withers, M. C., & Ireland, R. D. (2021). The effect of CEO regulatory focus on changes to investments in R&D. *Journal of Product Innovation Management*, 38, 401–420.

Shah, R., & Swaminathan, V. (2008). Factors influencing partner selection in strategic alliances: The moderating role of alliance context. *Strategic Management Journal*, 29(5), 471–494.

Simon, H. (1945). *Administrative behavior*. Free.

Staw, B. M., & Hoang, H. (1995). Sunk costs in the NBA: Why draft order affects playing time and survival in professional basketball. *Administrative Science Quarterly*, 40(3), 474–494.

Su, T., Yu, Y., Chen, Y., & Hou, W. (2023). On or off: The triggering effect of underperformance duration on cooperative innovation. *Technovation*, 126, 102817.

Surdu, I., Greve, H. R., & Benito, G. R. (2021). Back to basics: Behavioral theory and internationalization. *Journal of International Business Studies*, 52(6), 1047–1068.

Tallman, S., & Shenkar, O. (1994). A managerial decision model of international cooperative venture formation. *Journal of International Business Studies*, 25(1), 91–113.

Tuncdogan, A., Boon, A., Mom, T., Van Den Bosch, F., & Volberda, H. (2017). Management teams' regulatory foci and organizational units' exploratory innovation: The mediating role of coordination mechanisms. *Long Range Planning*, 50(5), 621–635.

Tunisini, A., & Zanfei, A. (1998). Exploiting and creating knowledge through customer–supplier relationships: Lessons from a case study. *R&D Management*, 28(2), 111–118.

Tushman, M. L., & Rosenkopf, L. (1996). Executive succession, strategic reorientation and performance growth: A longitudinal study in the U.S. Cement industry. *Management Science*, 42, 939–953.

Tyler, B. B., & Caner, T. (2016). New product introductions below aspirations, slack and R&D alliances: A behavioral perspective. *Strategic Management Journal*, 37(5), 896–910.

Un, C. A., Cuervo-Cazurra, A., & Asakawa, K. (2010). R&D collaborations and product innovation. *Journal of Product Innovation Management*, 27, 673–689.

Uzzi, B. (1996). The sources and consequences of embeddedness for the economic performance of organizations: The network effect. *American Sociology Review*, 61, 674–698.

Uzzi, B. (1997). Social structure and competition in interfirm networks: The paradox of embeddedness. *Administrative Science Quarterly*, 42(1), 35–67.

von Hippel, E. (1994). Sticky information and the locus of problem solving: Implications for innovation. *Management Science*, 40, 429–439.

Weber, L., & Mayer, K. J. (2010). Simon says: Expanding the definition of bounded rationality. Paper presented at the Atlanta Competitive Advantage Conference.

Weber, L., & Mayer, K. J. (2011). Designing effective contracts: Exploring the influence of framing and expectations. *Academy of Management Review*, 36(1), 53–75.

Weber, L., Mayer, K., & Macher, T. (2011). An analysis of extendibility and early termination provisions: The importance of framing duration safeguards. *Academy of Management Journal*, 54(1), 182–202.

Weigelt, C. (2012). Leveraging supplier capabilities: The role of locus of capability development. *Strategic Management Journal*, 34(1), 1–21.

Wiseman, R. M., & Gomez-Mejia, L. (1998). A behavioral agency model of managerial risk taking. *Academy of Management Review*, 23(1), 133–153.

Zaheer, A., McEvily, B., & Perrone, V. (1998). Does trust matter? Exploring the effects of interorganizational and interpersonal trust on performance. *Organization Science*, 9(2), 123–141.

Publisher's note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Authors and Affiliations

Andrea Martínez-Noya¹ · Esteban García-Canal¹ · Rajneesh Narula² 

✉ Rajneesh Narula
r.narula@reading.ac.uk

Andrea Martínez-Noya
noya@uniovi.es

Esteban García-Canal
egarcia@uniovi.es

¹ School of Economics and Business, University of Oviedo, Avda. del Cristo s/n,
Oviedo 33006, Spain

² University of Reading, Henley Business School, Reading, UK