

COOPETITION: VALUE CREATION OPPORTUNITIES FOR ENTREPRENEURIAL FIRMS

ABSTRACT

Firm's pursuing entrepreneurial rents often face challenges such as risk, uncertainty, and limited resources. Our paper lays out insights from three theoretical perspectives, the resource-based view, dynamic capabilities, and game theory, to illustrate how coopetition can be a significant source of value creation in this context. We suggest that the types of resources most relevant for value creation are often held by competitors, who are servicing similar customers and confronting similar challenges. This facilitates access to complementary resources where internal development is time-consuming or costly. In addition, competitors can use each other's knowledge and resource flow to extend and upgrade resources in dynamic environments. This enables positive-sum outcomes that exceed the sum-total of value creation efforts if pursued independently. Our paper illuminates underpinning value creating mechanisms in coopetition, demonstrates unique benefits that may be exclusively available to entrepreneurial firms, and underscores the value creating potential of coopetition.

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Global technology industries are characterized by rapid innovation cycles, convergent technologies, and blurred competitive and cooperative boundaries. Firms become embedded in complex combinations of relationships to access an increasingly diverse array of value creation opportunities. This poses a particularly significant challenge for entrepreneurial firms, who have limited resource pools and thus fewer opportunities to identify value creation potential (Bengtsson & Johansson, 2014). In this context, the merits of cooperating with competitors — cooperation — have received theoretical and empirical support (Gnyawali & Park, 2009:2011; Ritala, 2012). Coopetition can lead to superior performance as competitors work together in some areas while retaining pressure toward improvements in others (Bengtsson & Kock, 2000).

There is limited discussion in the literature concerning the viability of a cooperation strategy for entrepreneurial firms. The lacuna is notable as entrepreneurial activities are characterized by uncertainty (Alvarez, 2007; Shane & Venkataraman, 2000) and cooperation has been identified as critical in such environments (Gnyawali & Park, 2009; Padula & Dagnino, 2007; Peng et al., 2012; Ritala & Hurmelinna-Laukkanen, 2013). We suggest that cooperating with competitors can be a significant source of value creation for entrepreneurial firms. Our paper unpacks insights from the capabilities literature (Barney, 1991; Teece, Pisano, & Shuen, 1997; Wernerfelt, 1984) to identify cooperation as an important source of entrepreneurial rents. It isolates the role of value creation in cooperation before considering how it is aligned with the pursuit of entrepreneurial rents. Incorporating the resource-based view, dynamic capabilities, and game theory, we illustrate how competitors' resources and capabilities can offer significant value creation opportunities while simultaneously reducing both uncertainty and risk.

Our paper makes several contributions to theory and policy. First, it highlights cooperation as an important source of entrepreneurial rents. We outline benefits such as resource complementarities, flexibility, and reductions in uncertainty and risk that entrepreneurial firms can achieve through cooperation. Second, we propose novel mechanisms linking cooperation to performance including superior knowledge transfer capabilities, managing uncertainties in dynamic environments, and reduced opportunistic risks. Our research also underscores previous policy contributions that demonstrate the benefits of competitor cooperation, especially between small firms in dynamic industries (e.g., Jorde & Teece, 1990). We caution against confusing cooperation with collusion and, by reinforcing the value creating nature of cooperation, offer an effective means for distinguishing between the two.

CONCEPTUAL DEVELOPMENT

Cooperation is defined as “the dyadic and paradoxical relationship that emerges when two firms cooperate in some activities, such as in a strategic alliance, and at the same time compete with each other in other activities” (Bengtsson & Kock, 2000: 412). Cooperation with competitors raises the prospect of collusion but, in the context of cooperation, it is no obstacle to free competition (cf. Porter & Fuller, 1986; Smith, 1937). That is, cooperation does not involve cooperation smothering competition. Rather, the cooperation concept characterizes competitor interactions where cooperation occurs in value creating activities and, simultaneously, competition occurs to capture the value created. By explicitly linking cooperation to value creation, and competition to value capture (Ritala & Hurmelinna-Laukkanen, 2009), we offer a transparent distinction between cooperation and collusion. Collusion occurs when competitors cooperate to capture value from other stakeholders in ways that restrict free competition. Cooperation, on the

other hand, requires cooperation to create additional value — a bigger pie (Brandenburger & Nalebuff, 1997) — for competitors to capture their slice through open competitive actions (Gnyawali, He, & Madhavan, 2008).

Although competition and cooperation are interdependent in coopetition (Chen 2002:2008; Gnyawali, He, Madhavan, & Bengtsson, 2016), by understanding their fundamentally different purposes, we can isolate the processes of value creation and value capture. In coopetition alliances, value creation is the core purpose of *cooperation* between competitors (Gnyawali & Park, 2011; Ritala & Hurmelinna-Laukkanen, 2009). We use value creation to illustrate how competitors may cooperate to pursue entrepreneurial rents.

Value creation for entrepreneurial rents

Entrepreneurial rents are those where the value of the opportunity is uncertain (Alvarez, 2007; Rumelt, 1987). This contrasts with quasi-rents, where parties make investments to achieve a return that is either known or known probabilistically (Alvarez, 2007). Entrepreneurship involves making novel connections between means and ends (Kirzner, 1997), necessitating that firms combine a steady pipeline of new ideas through opportunity-seeking with precise advantage-seeking processes for capturing and internalizing value to achieve sustainable superior performance (Hitt, Ireland, Camp, & Sexton, 2001; Ireland, Hitt, & Sirmon, 2003; Ketchen, Ireland, & Snow, 2007; Zahra, Sapienza, & Davidsson, 2006). While advantage-seeking is associated with value capture, our focus is on opportunity-seeking and the cooperative combination and organization of unique resources bundles (Alvarez & Busenitz, 2001). This is analogous to value creation for entrepreneurial rents; the employment of heterogeneous resources for the identification and creation of new market opportunities (Ketchen et al., 2007).

Entrepreneurs are no longer seen as one man armies against the world (Gassenheimer, Bacus, & Bacus, 1996); reflected by a diverse body of research that demonstrates the merits of collaborative opportunity-seeking (Chesbrough, Vanhaverbeke, & West, 2006; Gnyawali & Park, 2009:2011; Powell, Koput, & Smith-Doerr, 1996; Ribeiro-Soriano & Urbano, 2009). Potential collaborators include buyers, suppliers, complementors, and competitors (Dowling, Roering, Carlin, & Wisnieski., 1996; Shipilov, 2012). In the following sections, we use three theoretical lenses to consider partnering with competitors as an approach to generating entrepreneurial rents.

How entrepreneurial firms can create value through coopetition? A resource based view

While theories like transaction cost economics (Coase, 1937; Williamson, 1975) contribute to understanding the cost minimization outcomes of coopetition (Hennart, 1988; Kogut, 1988; Ring & Van de Ven, 1992), we focus on coopetition to create additional value (Alvarez, 2007; Brandenburger & Nalebuff, 1997; Zajac & Olsen, 1993). Organizing resources is a necessary part of value creation and, as such, is a fundamental element of entrepreneurial activity (Alvarez & Barney, 2004). The RBV identifies valuable, rare, inimitable, and non-substitutable resources that are heterogeneously distributed and not easily tradeable as sources of competitive advantage (Barney, 1991). As the nature of firm boundaries have become more permeable, necessary resources are available through external networks (Garrette, Castañer, & Dussauge, 2009; Gnyawali & Madhavan, 2001). Where a firm does not or cannot control all the resources required for value creation, its ability to build external relationships, access resources, and create value from

shared resources becomes a key source of entrepreneurial rents (Cassiman, di Guardo, & Valentini, 2009; Garrette et al., 2009; Ketchen et al., 2007). Under this relational view, an effective strategy shifts from the static objective of protecting valuable in-house resources to a more dynamic resource-sharing and joint development approach (Dyer & Singh, 1998).

The types of resources with value creation potential are often held by competitors, who are already servicing customers in the focal arena (Chetty & Wilson, 2003; Park, Srivastava, & Gnyawali, 2014) and confronting similar challenges (Dussauge, Garrette, & Mitchell, 2000). Coopetition can enable prompt access to strategically relevant resources and reduce the time and costs associated with internal development or acquisition (Gnyawali & Park, 2009:2011). In turn, this creates new resources that are rare, valuable, inimitable, and non-substitutable through the deployment of a more diverse knowledge base and greater reputational capital than a single competitor could muster alone (Barringer & Harrison, 2000; Hult, Ketchen, & Nichols, 2002). Coopetition, as distinct from a non-competitor alliance, allows competitors to retain their market-facing competitive stance while cooperating to pursue value creation for entrepreneurial rents.

Cooperation with competitors facilitates the combination of complementary and scarce resources, leading to new technologies, products, and services. Moreover, the proximity of competitors in market, technological, and resource arenas can reduce the costs associated with identifying external complementarities (e.g., Dyer & Singh, 1998). This is illustrated by the S-LCD venture, which merged Sony's competencies in televisions with Samsung's expertise in LCD technology (Gnyawali & Park, 2011). It led to, among other outcomes, the establishment of LCD-TVs as the industry standard and a situation whereby the partners' resource sets are more valuable in combination than the sum of their isolated efforts. In an entrepreneurial setting, there will be complementarities between the opportunity-seeking skills of small firms and the advantage-seeking expertise of larger organizations operating in similar areas. When combined, these capabilities can facilitate improved value capture and protection by small firms, while fueling strategic renewal for their larger partners (Ireland & Webb, 2007; Ireland et al., 2003; Ketchen et al., 2007).

The effectiveness of opportunity-seeking behavior is contingent on the firm's ability to integrate new knowledge with existing knowledge (Ketchen et al., 2007). Knowledge integration is a complex cognitive process and the transfer of tacit knowledge is enhanced by close personal interaction (Ryan & O'Connor, 2013) and understanding of shared contexts. Similar focuses, in terms of markets, technologies, and resources, leads to overlapping dominant logics among competitors and high levels of relative absorptive capacity (Cohen & Levinthal, 1990; Lane & Lubatkin, 1998). This means that coopetition partners may be uniquely well-equipped to identify, assimilate, and apply each other's new and valuable knowledge (Dussauge et al., 2000; Gnyawali & Park, 2009). Absorptive capacity eliminates learning barriers (e.g., effort and investment), creates transparent lines of communication, and reduces the need to codify tacit knowledge. This creates causal ambiguity that prevents imitation and increases the value available for coopetition partners (Alvarez & Busenitz, 2001).

Overlapping dominant logics and prior related knowledge also increase the likelihood that competitors will share similar beliefs about the value of heterogeneous resource combinations. As the value of entrepreneurial rents are not known in advance (Alvarez, 2007; Rumelt, 1987), it is the *believed* value of entrepreneurial opportunities that is important for the initial decision to

cooperate (Alvarez & Busenitz, 2001; Shane & Venkataraman, 2000). The similarity of beliefs between competitors is significant in this regard and may lead to an establishment phase that requires less effort and investment to coordinate.

Cooperation with competitors may enable entrepreneurial firms to manage the uncertainty associated with entrepreneurial rents. Contrary to risk, where possible outcomes and the probability of arriving at those outcomes are known, uncertainty refers to situations where outcomes and their probability are unknown (Alvarez, 2007). Concerns surrounding uncertainty exist for all entrepreneurial firms as the value of entrepreneurial rents cannot, by definition, be known in advance. Inability to predict the realizable future value of entrepreneurial rents is particularly challenging for small firms (Alvarez, 2007), whose limited resources mean that they have but a few chances to identify an entrepreneurial opportunity that can yield satisfactory quasi-rents. Motivated by substantially overlapping interests, it means that entrepreneurial firms may turn to competitors to pool resources and reduce uncertainty. On one hand, competition enables firms to generate carefully crafted offerings that improve over time as customers make real world choices among competing alternatives. On the other, cooperation in sharing and combining resources allows firms to access a broader resource set and achieve higher levels of specialization. Thus, the collaborative pursuit of entrepreneurial rents can achieve a reduction in the net uncertainty faced by each firm.

There are inherent risks associated with combining resources to pursue entrepreneurial rents but these may be less in cooperation. Relational performance increases with investments in specialized resources (Das, 2005; Dyer & Singh, 1998; Parkhe, 1993). Highly specialized resources require high levels of tacit knowledge and embeddedness, and cannot be redirected without some loss of productive value (Williamson, 1991). The more specialized an asset set becomes, the lower its value in alternative uses and the more exposed the owner becomes to the potential risks of hold-up from an opportunistic partner (Dyer, 1997; Williamson, 1991). These risks may be lower in cooperation because resource similarity between competitors (Chen, 1996) means that investment in specialized assets may require a less significant departure from a firm's strategic resource goals. Where highly specific assets must be redirected, competitors facing the same exogenous challenges (Gnyawali & Park, 2011; Ingram & Qingyuan, 2008) can more easily find other purposes for these resources beyond the boundaries of the alliance. In this way, cooperation can improve the gross value creation potential of partners by sharing and reconfiguring existing resources, while simultaneously achieving a net reduction in both uncertainty and risk.

A dynamic capabilities perspective

Dynamic capabilities “can be harnessed to continuously create, extend, upgrade, protect, and keep relevant the enterprise’s unique asset base” (Teece, 2007: 1319) in rapidly changing environments. As an extension of the resource-based view, it accounts for the dynamic nature of competitive advantage (Eisenhardt & Martin, 2000; Teece, 2007) and entrepreneurial creativity in the organization of resources (Alvarez & Busenitz, 2001; Barney, 2001). Dynamic capabilities alter the firm’s resource set by sensing changing requirements, reconfiguring capabilities, and transforming resources and routines based on experience. They are particularly relevant in uncertain, non-linear, and discontinuous contexts (Ambrosini, Bowman, & Collier, 2009), moving beyond learning from experience (Winter, 2003) to incorporate the imaginative and creative skills

of the entrepreneur – both in the identification of new opportunities and the creation of new resource sets.

In an entrepreneurial context, dynamic capabilities are relevant because value creation decisions are often made without a clear idea of the scale of the opportunity or the potential payoff (Alvarez, 2007; Shane & Venkataraman, 2000). Entrepreneurship is about “cognition, discovery, pursuing market opportunities, and coordinating knowledge that lead to heterogeneous outputs” (Alvarez & Busenitz, 2001: 757). This describes a fundamentally iterative process, where the sources of sustainable competitive advantage are not inimitable resources themselves, but the capabilities to adapt and improve these resources to meet a constantly evolving set of challenges (Teece et al., 1997). When facing this type of uncertainty, capabilities to pivot rapidly, and revise routines and processes, are highly significant (March, 1991). Entrepreneurial firms can use cooperation alliances to learn from evolution, adaptation, and replication. Accessing competitors’ knowledge and resources to pursue entrepreneurial rents stimulates entrepreneurial orientation, keeps ordinary capabilities flexible (Zahra et al., 2006), and determines the effectiveness of its opportunity-seeking (e.g., Teece, 2007:2014).

Game theory

Game theory can be used to illustrate how the fates of individual competitors are intertwined with that of their ecosystems (Brandenburger & Nalebuff, 1997). It suggests that the risks of opportunism in cooperation (e.g., Park & Russo, 1996) may be overstated and cooperation can yield superior value creation opportunities. Through the Prisoner's Dilemma model, we can understand that, even in a fixed-sum environment, firms can reduce available payoffs by overly aggressive or opportunistic acts (Quintana-Garcia & Benavides-Velasco, 2004; Ritala & Hurmelinna-Laukkanen, 2009). Prisoner's Dilemma reflects the hypothetical choices available to a partnership of captured robbers being questioned independently. Each must choose to either defect from their robbing partnership by opportunistically 'squealing' on the other or to continue to cooperate and tell the police nothing. The most desirable outcomes for each party are Unilateral Defection > Mutual Cooperation > Mutual Defection > Unilateral Cooperation. Similarly, alliance research asserts that one partner acting opportunistically can capture the largest individual reward (total value minus what is destructed from the erosion of trust, goodwill, and cooperation). However, though cooperation generates a slightly smaller individual benefit to both firms, the largest total payoff is preserved.

Game theory also illustrates how cooperation may be optimal at the firm-level when repeated interactions are likely. Where there are repeated engagements, opportunistic firms are ultimately deleted because their behavior eliminates future opportunities to cooperate with other actors, incites retaliation, intensifies future rivalry (Axelrod, 1984), and ruins the firm’s reputation in areas beyond the alliance (Gulati, Nohria, & Zaheer, 2000; Hill, 1990). These outcomes raise costs while precluding future access to collaborative pursuits of entrepreneurial rents. Where entrepreneurial firms place sufficient value on future transactions, cooperation in some areas can offer optimal returns (Axelrod, 1984).

In addition, game theory highlights how cooperation between competitors can lead to superior and positive-sum value creation where available (Quintana-Garcia & Benavides-Velasco, 2004). This is illustrated by the Stag Hunt game; two hunters can work independently to each catch

a hare, or collaborate to catch a deer. Naturally, a deer represents a bigger coup than two hares and, in the same vein, coopetition presents opportunities for competitors to combine complementary and homogeneous resources and pursue larger projects than either could manage independently (Garrette et al., 2009; Ritala & Hurmelinna-Laukkanen, 2009). In 2001, for instance, Astrium and TAS, two European satellite manufacturers, cooperated to design and build a new European orbital platform with capabilities to support extremely powerful telecommunications satellites and compete with top-of-the-range American manufacturers. This was a project that neither firm could have achieved alone (Fernandez, Le Roy, & Gnyawali, 2014).

DISCUSSION

Cooperation is critical for achieving entrepreneurial goals (Ketchen et al., 2007; Teng, 2007). Drawing from the resource-based view, dynamic capabilities perspective, and game theory, we illuminate how competitors may be the most suitable partners when pursuing value creation activities focused on entrepreneurial rents. Cooperation with competitors facilitates access to strategically relevant and complementary resources that require less effort and investment to recognize, assimilate, and apply. Coopetition can also reduce the entrepreneurial uncertainty faced by each firm and limit the risks of high resource specificity. Dynamic capabilities necessary for firms to identify and create value from coopetition partners' innovation processes can enable firms to reform routines, and pivot in rapidly evolving environments. Additionally, game theory illustrates how opportunistic risks may be reduced and coopetition can enable firms to pursue value creation outcomes that a single firm could not manage alone.

Our paper makes three contributions. First, we demonstrate how entrepreneurial firms can access valuable and relevant resources by partnering with their competitors. The entrepreneurship literature has traditionally considered how entrepreneurial activities are organized inside the firm (Covin & Slevin, 1991; Miller, 1983; Shane & Venkataraman, 2000) but globalization, technological advancements, and the evolving complexity of networks have brought an emerging acknowledgment that firms will not own or control all the resources they require. The benefits of coopetition that we highlight include resource complementarities, flexibility, and reductions in uncertainty and risk. We build our insights from highly influential economic theories; meaning that our theorizing is well-grounded and, in many cases, sophisticated empirical constructs are already available for testing our work. Second, we highlight novel ways in which cooperation with competitors can contribute to firm performance. Our paper suggests that coopetition can generate benefits such as the efficient transfer of tacit knowledge, reduced uncertainties from the pursuit of entrepreneurial rents, and decreases in the risks of hold-up and knowledge misappropriation. This builds on previous conceptual work in this area (e.g., Gnyawali & Park, 2009; Ritala & Hurmelinna-Laukkanen, 2009) and advances our understanding of coopetition performance. Third, our research can inform antitrust policy. We highlight value creation benefits available from competitor cooperation for entrepreneurial firms in dynamic industries (e.g., Jorde & Teece, 1990). By reinforcing the value creation focus of coopetition, we offer an effective means for distinguishing between cooperation and collusion.

There are exciting opportunities to verify and extend our work. We adopt a traditional approach to entrepreneurship, whereby the identification of an opportunity occurs prior to the organization of resources. However, it would also be interesting to examine coopetition from the opposite perspective — where entrepreneurship begins with available resources and proceeds to

opportunity identification (Sarasvathy, 2001). This viewpoint can unearth further opportunities for superior value creation by accessing competitors' resources and capabilities. The logic driving the relevance of competitors' assets will be similar, but an effectuation approach will position cooperation as the source of entrepreneurial opportunity, rather than the means for achieving it.

The research path we have opened must also be balanced by simultaneous consideration of the value capture processes employed by entrepreneurial firms. To differentiate between cooperation and collusion, our conceptualization posits that value creation is undertaken collaboratively, while value capture activities are pursued individually. We examine how firms can discover value, but we do not consider critical appropriation processes that are necessary for harvesting these discoveries (Ketchen et al., 2007). When entering an alliance with a competitor, fundamental risks remain concerning their capabilities to erode existing advantages, even in areas unrelated to the entrepreneurial venture. These threats are particularly apparent when bargaining power is distributed asymmetrically (Shipilov, 2009), such as when smaller firms are partnering with larger ones (Bengtsson & Johansson, 2014). Therefore, if cooperation is to be sustainable for entrepreneurial firms, future research is required to consider how entrepreneurial competitors manage value capture activities, as well as how they simultaneously balance value capture with value creation (Alvarez & Barney, 2004; Ketchen et al., 2007).

Lastly, the firm's approach to interacting with partners is a key determinant of alliance outcomes (Franco & Haase, 2013; Launsbury, 1998). Therefore, a complementary approach to ours will consider how entrepreneurial firms create value through cooperation. Entrepreneurial firms identify and create opportunities at a faster rate (Zahra et al., 2006) but their proactivity and aggressiveness may be destabilizing for an alliance. We encourage inquiries using established dimensions of entrepreneurial orientation (Lumpkin & Dess, 1996; Miller, 1983). Empirical scrutiny in this area is necessary to develop a holistic understanding of cooperation as a source of value creation for entrepreneurial firms.

In summary, our paper lays out opportunities for firms to use cooperation as a vehicle to pursue entrepreneurial rents. We hope that scholars can build on the insights we put forward and further advance this intriguing line of research.

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